15e-19

Rattus norvegicus pai Human homeobox protei Mus musculus (clone 6 M.musculus Otx2 mRNA. M.musculus mRNA for h Mus musculus MHox pro

RNU29174 HUMPHOX1A

je-15

M. auratus mRNA for al G.gallus Prx-2 (SB) m gMHox-homeobox [chick Gallus gallus paired-

Rat cartilage homeopr Mus musculus homeobox

MUSCHX10A MMHOBOXG MUSMHOX HUSM31986 HSU31986 HATCAT1X MMU03873 CAU07056

Carassius auratus hom

Xenopus laevis homeob M.musculus Otxl mRNA. Xenopus laevis orthod

		1 1 1 1 1 1		
********	***************************************	1 239	0.66 66	2399
		7	82 3.4	1433
<u> </u>		m ·	e .	3089
>, 		₹ 1		204
) 		, n v	<b>7</b> (	949
			72 3.0	1442
- -		60		1760
<u>-</u>		6	7	3359
		10		1588
****	************************	11	0	1744
•		12	σ	849
Releas	<ol><li>2.1D John F. Collins, Biocomputing Research Unit.</li></ol>			892
Copyri	ght (c) 1993, 1994, 1995			1084 4
•	Distribution rights by IntelliGenetics, Inc.			
MPsrch nn n.a.	- n.a. database search, using Smith-Waterman algorithm		66 2.7	498 5
I	•		66 2.7	867 5
: uo u	Fri May 30 15:14:15 1997; MasPar time 2236.97 Seconds		65 2.7	
	1204.888 Million cel		66 2.7	948
dibular output not	generated.		66 2.7	948
			65 2.7	1103
	>US-08-701-278-1		66 2.7	1230 8
ption:	(1-2424) from USO8701278.seq		66 2.7	2161
ct Score:	2424		62 2.6	865
	1 GCAGAGGTAGGCAGGGTTCCGAAAAAAAAAAAAA		?	1274
Comp:	CGTCTCCATCCGTCCCAAGGCTTTTTTTTTTTTT		6	1541
			· •	1915
Scoring table:	TABLE default		٠i ر	1915
	Gap 6		ni o	1915
			, i	7/57
Mmarch STD:	Dbase 0; Query 0		9.0	2203
Searched.	111740 apre 455061714 haspe v 2		4 0	28090
	י בשפשת ברסורוני יבששה		. ~	5015
Post-processing:	Minimum Match 0%		61 2.5	1069
	Listing first		, ,	1292 8
			7	1463 8
Database:			6	1643
			6	869
	0:INV4 11:INV5 12:INV6 13:INV7 14:ORG		~	2347 8
	16:VRT 17:PLN 18:PRO1 19:PRO2 20:ROD 21:SYN 22:UNC		~	
: ;		43	٠i ،	
Database:	CHO4. FC CHO4.	4.	7.	4 7767
•	25:BCTA 26:BCTZ Z7:BCT3 Z8:BCT3 Z8:BCT5 30:BCT0 31:BCT/ 32:BCT8 33:BCT9 34:GEN1 35:GEN2 36:HTG 37:INV1 38:INV2	C. 4.	6.2	3210
	: INV4 41: INV5			
,	: MAM2 48: MAM3			
•	:PAT3 55:PAT4			
	PLNS 62:PLN6	RESULT I		000
	0/:FKL1 08:FKL2 09:FKL3 /U:FKL4 /L:FKL3 /2:FKL0 /3:FKL/ 74.DRT8 75.DRT9 76.DRT10 77.DRT11 78.DRT13 79.DRT13	DESTINITION	RNUZ91/4 2399	EESA
Į	1 - ROD   82 - ROD		(DRG11) mRNA	NA. COM
	:ROD8 89:STR 90:SYN 91:	ACCESSION	029174	
	: VRL4	NID	g1184126	
Database:		KEYWORDS		
	101:BCT 102:GEN 103:INVI 104:INVZ 105:MAM 106:VRT	SOURCE	rat.	
	114.VRI	ORGANISM	Fukarvotae.	vegicus
Database:	u - emb14897		Vertebrata;	
	115:part1 116:part2		Murinae; Rattus.	Rattus.
		DEFEDENCE	1 (hasse 1	1 +0 23

Schistosoma mansoni p Xenopus laevis cartil Sea urchin late gastr Drosophila melunogast

DMU52968 DMU52968 DM52968

93

DMGSC

X.laevis organizer sp Rattus norvegicus OTX Danio rerio orthodent

Pax-6-transcription f Zebrafish otx2 mRNA f Zebrafish otx2 mRNA f

X.laevis mRNA for hom

MAALX3
GGPRX2
S6908
CHKPRX1
XLXOTYZS1
MOOTX1
MOOTX1
XCOTXNUC
S69508
ZEFOTX2
BROTX2
BROTX2
BROTX2
SEFOTX3
XELIOMBXA
KATOTXIX
DRU14592
SCMSMOXIII

Drosophila melanogast Drosophila melarogast D.melanogaster mRNA f C. coturnix mRNA for B.rerio mRNA for Pax[ B.rerio pax-6 mRNA. Paracentrotus Ilvidus.

H.sapiens oculorhombi Human paired box gene Mouse Pax-3 gene for

Rattus norvegicus Pax

MMPAX3R RNU69644 RNU69644 S78747 DMREPO

rk2=glial-specific ho D.melanogaster mRNA f

Xenopus laevis goosec Pax-6 [rats, small ey

PLU14621 XELGSCHB S74393 BRPAXZFA BRPAX6

M.musculus Phox2 mRNA

MMPHOXH HUMOCLHMB HUMPAX6AN

ALIGNMENTS

Saito, T., Greenwood, A., Sun, O. and Anderson, D. J. Greenwood, A., Sun, O. and Anderson, D. J. Greenwood, A., Sun, O. and Anderson, D. J. Green by differential RT-FCR of a novel paired homeodomain protein specifically expressed in sensory neurons and a subset of their CNS targets
Mol. Cell. Neurosci. 6 (3), 280-292 (1995) ıs ochondrial eukaryotes; Metazoa; Chordata; heria; Rodentia; Sciurognathi; Myomorpha; Muridae; 19 bp mRNA ROD 10-FEB-1996 is paired-like homeodomain transcription factor mplete cds. Murinae; Rattus. REFERENCE AUTHORS TITLE JOURNAL

TITLE JOURNAL MEDLINE REFERENCE AUTHORS

Amy Greenwood, Biology, Caltech, 216-76 2 (bases 1 to 2399) Salto, T. dreenwood, A.L., Sun, Q. and Anderson, D.J. Frect Submission (1995) Amy Greenwood, Biology, Ca

and a control of the proper species

SUMMARIES

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Variance 9.680; scale 1.317

Mean 12.749;

Statistics:

a Query Match Length DB No. Score Result

Description

Pred. No.

```
781
                                                             841
                                                                                                                                     1021
              721
                                                                                                             961
                                                                                                                                                             1081
                                                                                                                                                                                      1141
  721
                                      781
                                                  841
                                                                          901
                                                                                     901
                                                                                                 961
                                                                                                                          1021
                                                                                                                                                                                                                         1261
                                                                                                                                                                                                                                                                                   1381
                                                                                                                                                                                                                                                                                                            1441
                                                                                                                                                 1081
                                                                                                                                                                          1141
                                                                                                                                                                                                 1201
                                                                                                                                                                                                             1201
                                                                                                                                                                                                                                     1261
                                                                                                                                                                                                                                                1321
                                                                                                                                                                                                                                                            1321
                                                                                                                                                                                                                                                                        1381
                                                                                                                                                                                                                                                                                                 1441
                                                                                                                                                                                                                                                                                                                                    1501
                                                                                                                                                                                                                                                                                                                                                                                    1621
                                                                                                                                                                                                                                                                                                                                                                                                             1681
                                                                                                                                                                                                                                                                                                                                                                                                                        1741
                                                                                                                                                                                                                                                                                                                        1501
                                                                                                                                                                                                                                                                                                                                                 1561
                                                                                                                                                                                                                                                                                                                                                             1561
                                                                                                                                                                                                                                                                                                                                                                         1621
                                                                                                                                                                                                                                                                                                                                                                                                 1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                1801
                        셤
                                                 셤
                                                                        g
              ö
                                      ò
                                                             ò
                                                                                     ŏ
                                                                                                셤
                                                                                                            ŏ
                                                                                                                        ద
                                                                                                                                     ò
                                                                                                                                                                        g
                                                                                                                                                                                                                        셤
                                                                                                                                               셤
                                                                                                                                                          Ω
                                                                                                                                                                                     ò
                                                                                                                                                                                               g
                                                                                                                                                                                                            Ω
                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                염
                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                     /product-"paired-like homeodomain transcription factor"
/db_xref="PID: 91144015"
/db_xref="PID: 91144015"
/translation-"MYVFDPQLEGTAPFGNHSTGDFDDGFLRRKORRNRTTFALQO
LEALENYACHTY PUPVTREELAMKINLTEARVOWFFONRAKWRTERGASDOEPGA
KEPMAEVTPPPVRNINSPPPGDQARGKKEALEAQQSIGRTVGPAGPPFPSCLPGTLLN
TATYAQALSHYASLKGGPLCSCCVPDPMGLSFLPTYGCQSNRTASVAALRMKAREHSE
AVQGSANLLPSTSSSPGPASKQVPPEGSQDKPSPTKEQSEGEKSV"
                                                                                                                                          ö
                                                                                                                                                                                                                             240
                                                                                                                                                                             240
                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                      099
                                                                                                                                                      9
                                                                                                                                                                  9
                                                                                                                                           Gaps
                                                                                                                                                     gcaagaaggcctggaggcccagcagcagagcctgggacgcacagtgggcccgcgcgggc
                                                                                                                                                                                                                            tgtgctcagcttgccaggccggagccacgcacgggcacaagtctgtcaggccgccatcag
                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                              Length 2399
                                                                                                                                         0; Indels
                                                                                                                              Score 2399; DB 88;
Pred. No. 0.00e+00;
0; Mismatches 0;
               /organism="Rattus norvegicus"
/strain="Sprague Dawley"
/clone="E13.5"
279..1070
/gene="DRG11"
                                                                                                            549
                                                                                                     /note="25 A nucleotides"
681 c 658 g 54
 USA
Pasadena, CA 91101,
Location/Qualifiers
1..2399
                                               /codon_start=1
                                                                                                                           Juery Match
Best Local Similarity 100.0%;
Matches 2399; Conservative
                                                                                                            4
Biology,
                                                                                                            511
                                                                                                polyA_site
            source
                                                                                                           BASE COUNT
                                                                                                                                                                                                     121
                                                                                                                                                                                                                            181
                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                   CDS
     FEATURES
                                                                                                                                                     g
                                                                                                                                                                 õ
                                                                                                                                                                            윱
                                                                                                                                                                                      õ
                                                                                                                                                                                                   윱
                                                                                                                                                                                                             ò
                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                          g
```

à

ò

Š 원 ç 셤 Š 8 2 9 à 8

1380 1020 1140 1140 1320 1500 1560 1860 840 900 960 960 tgtcccatgtggcatctctgaaaggggcccactgtgctcttgctgcgtcccagacccta CTITCTTCCCCTCCTGCTTGCCAGGGACCCTCCTGAACACAGCCACTTATGCCCAGGCCC tggggctctcctcccccacttacggttgccagagtaaccgcacagccaggtggctg gtggactatcagccagttctcactccattcagccaggactggcatcggcctctttgtct gtgttcacttgcaggccccgctctctcagaagagtgatgggaagttcaccaatcagaat GTGGACTATCAGCCAGTTCTCACTCCCTTCAGCCAGGACTGGCATCGGCCTCCTTTGTCT

างการเการ์ เการ์ เกาะเกาะเกาะเกียร์

m

1

```
Neuron 13 (2), 377-393 (1994)
94338694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
1..3089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /map="chromosome 12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          800 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /strain="CD1/129sv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="Chx10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 72.2%;
Matches 130; Conservative
                         Query Match 3.4%;
Best Local Similarity 71.6%;
Matches 136; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             897 c
                                                                                                                                                                                                                                                                                                                                                                                                         homeobox protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3089
                                                                                                                                                                                                                                                          400 aatgagagg 409
                                                                                                                                                                                                                                                                                     549 ACAGAGAGAG 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             703
                                                                                                                                                                                                                                                                                                                                                                                        g623165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polya_site
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
ORIGIN
                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                        NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                g
                                                                                                                                                                                                                                                          셤
                                                                                                               à
                                                                                                                                         셤
                                                                                                                                                                        ŏ
                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /translation="LDSPGNLDTLQAKKNFSVSHLLDLEEAGDMVAAQADENVGEAGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SLLESPGLTSGSDTPQQDNDQLNSEEKKKRKQRRNRTTFNSSQLQALERVFERTHYPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AFVREDLARRVNLTEARVQVWFQNRRAKFRRNERAMLANKNASLLKSYSGDVTAVEQP
                                                                                                                                                                                                               2100
                                                                                                                                                                                                                                                                         1801 GIGITCACTIGCAGGCCCGCTCTCTCAGAAGAGTGATGGGAAGTICACCAATCAGAAT 1860
                                                         1861 GTAGCTTTGTAGCCCAGGAAAGGACCAGAGACCCTTGAACCGGTAGGAAATCCCTAGGAAG 1920
                                                                                              atattgettteatgatggetgtteteattteagttetgataategagaegetgtgeteec 2280
                                                                                                                                                                                                                                                                                                                                                                                                       2221 ATATTGCTTTCATGATGGCTGTTCTCATTTCAGTTCTGATAATGGAGAGGCTGTGCTCCC 2280
                                                                                                                                                                                                                                                                                                                                                                                                                                                 aggegetetgeeteceettaaetetteaggageaeceeeteceetgtaataeteetaagt 2340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2281 AGGCGCTCTGCCTTAACTCTTCAGGAGCACCCCCTCCCCTGTAATACTCCTAAGT 2340
                                                                                                                                                                                                                                            2041 AGGCCCAACTITCACAGAGATITCIGCCGCAGTITAGCGTGGCTGTGTTCTTCACGCGA 2100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1433)
Gruenberg, D.A., Natesan, S., Alexandre, C. and Gilman, M.Z. Human and Drosophila homeodomain proteins that enhance the DNA binding activity of serum response factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2341 gtatcgtgcctcacttacggttactgcaacacatttgatggaacacactgtctccttta 2399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07-JAN-1995
                                                                                                                                                                                                               agggccaactttcacagagatttctgccgcagtttagcgtggctgtgttctttcacgcga
                                           gtagetttgtageecaggaaaggaecagagteettgaageggtaggaaateeetaggaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2341 GTATCGTGCCTCACTTACGGTTACTGCAACACATTTGATGGAACACACTGTCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IVPRPAPRPTDYLSWGTASPYRSSSLPRCCLHEGLHNGF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HUMPHOXIA 1433 bp mRNA PRI
Human homeobox protein (PHOX1) mRNA, 3' end.
M95929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /standard_name="homeodomain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product="homeobox protein"
/db_xref="PID:g189947"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /ceil_line="U118-MG"
/ceil_type="glioblastoma"
<1..600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dinging correction/Openblished (1992)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       364 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     homeobox protein.
Homo sapiens cDNA to mRNA.
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="PHOX1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="PHOX1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        373 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1..1433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9189946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                 2041
                                                                                                                                                                                                                                                                                                                                                                                                                                                   2281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
FEATURES
                                        1861
                                                                                                                                                                                                                                                                                                                                                                                          2221
                                                                                                                           - 1921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                              g
             à
                                        윱
                                                                                             셤
                                                                                                                           à
                                                                                                                                                        음
                                                                                                                                                                                    ð
                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

```
EELEKAFNEAHY POVYÄREMLAMKTELPEDRIQWFQNRRAKWRKREKCWGRSSVWÄE
YGIYGAMYRISIPLPESILKGAKDGINDSCAPWLLGMHKKSLERAAESGRKPEYVERGA
LPKLDKWEGDERAPERGASI SGEELRENSIAALRAKAGEHSTKVLGTVSGPDSLARNA
EKPEEEDATEEDRARKLSPPQLEDMA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
/product="biomecbox protein"
/db_xref="PID:623166"
/translation="MTGRAGEALSKPKSETVAKSTSGGAPARCTGFGIQEILGLNKEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PSSHPRAALDGLAPGHLLAARSVLSPAQVGSMGLLGPGGLPGFYTQPTFLEVLSDPQS
VHLQPLGRASGPLDTSQTASSDSEDVSSSDRKMSKSALNQTKKRKRRHRTIFTSYQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MUSCHX10A 3089 bp mRNA ROD 12-JAN-1995
Mus musculus (clone 6) homeobox protein (Chx10) mRNA, complete cds.
L34808
                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Chx10):
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurogńathi; Myomorpha; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Murinae; Mus.

1 (bases 1 to 3089)

1 Liu, I.S., Chen, J.D., Ploder, L., Vidgen, D., van der Kooy, D.,

Rathins, V. I. and McInnes, R.R.

Developmental expression of a novel murine homeobox qene (Chx10)
evidence for roles in determination of the neuroretina and inner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            503 atgaagcccactacccagatgtctacgcccgggagatgctggccatgaaaacggagctcc 562
                                                                                                                                                                                                                                                                                                                                                       443 agoggogacacaggacaatctttacttcctaccagctagaggagctggagaaagcattca 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 376 AGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGCAGTCTTTG 435
                                                                                                                   280 gtctttgagcggacacactatcctgatgcttttgtgcgagaagaccttgcccgccgggtg 339
                                                                                                                                                                                                                                                                            369 AGAAAACAGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGCA 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 80; DB 84; Length 3089; Pred. No. 1.02e-21;
Length 1433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches 50; Indels
                                                        0; Mismatches 54; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (strain CD1/129sv) cDNA to mRNA.
Mus musculus
Score 82; DB 78; Pred. No. 1.07e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism-"Mus musculus"
```

KEYWORDS SOURCE ORGANISM

AUTHORS TITLE JOURNAL

REFERENCE AUTHORS

REFERENCE

DEFINITION

RESULT

윱

ö

ACCESSION NID

```
/organism="Mus musculus"
/clone_lib="lambda-gt10 of 8.5 day embryos"
/clone_start=1
/codon_start=1
/product="DNa-binding protein"
/product="PID:951828"
/db_xref="SWISS-PROT:P4371"
/translation="MTSSYGHVLERQPALGGRLDSPGNLDTLQAKKNFSVSHLLDLEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGDMYAAQADESVGEAGRSLLESPGLTSGSDTPQQDNDQLNSEEKKKRQRRNTTFN
SSOLQALERVFERTHYPDAFVREDLARRYNLTEARVQVWFQNRRAKFRRNERAMLANK
NASLLKSYSGDVTAVEQPIVPRPAPRPTDYLSWGTASPYSAMATYSATCANNSPAGGI
                                                                                                                  Direct Submission
Submitted (07-ARR-1992) M. Kern, Childrens Hospital Res Foundation,
Basic Science Research, Elland and Bethesda Aves, Cincinnati, Ohio
4529-2899, USA
452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MHOx:a mesodermally restricted homeodomain protein that binds an essential site in the muscle creatine kinase enhancer Development 115, 1087-1101 (1992)
         Vertebrata; Eutheria; Rodentía; Sciurognathi; Myomorpha; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 369 AGAAAACAGCGCAGAAATCGGACAACCTTCGCTCTCAGCAGTTGGAAGCTCTGGAGGCA 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          429 GICITIGCCCAAACACACTACCCAGAIGTCTTCACCAGAGAAGAGCTAGCCAIGAAAATA 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     415 agaaagcagcggagaaacaggacaacattcaacagcagccaactgcaggccttggagcgt 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Murinae, Mus.
1 (bases 1 to 1066)
Cserjesi,P., Lilly,B., Bryson,L.J., Wang,Y., Sassoon,D.A. and
Olson,E.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gtotttgagoggacacattaccoggatgcttttgttcgagaagatotcgcacgtcgggtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MHox protein; homeodomain protein; muscle creatine kinase.
Mus musculus (library: C2 gtll) cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 949;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 72; DB 81; Length 949
Pred. No. 7.40e-18;
0; Mismatches 59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MA, ROD MENA MISSOLIUS MHOX Protein mRNA, complete cds. 9199583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NMANSIANLRLKAKEYSLORNOVPTVN"
420..600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    177 t
                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="homeobox"
279 c 254 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match 3.0%;
Local Similarity 68.9%;
es 131; Conservative
                                                                  (bases 1 to 949)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               549 ACAGAGAGAG 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         595 aatgagcgag 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                            REFERENCE
AUTHORS
                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                 JOURNAL
MEDLINE
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
MEDLINE
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B, Via Guglielmo Marconi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide sequences only
See K88883-4 for mouse Otx genes related to Orthodenticle, a
Drosophila gene important for controlling head development. (See
also X68879-X68882)
                                                      436 CCCAAACACACTACCCAGATGTCTTCACCAGAGAAGAGCTAGCCATGAAAATAAACCTCA 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nested expression domains of four homeobox genes in developing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      79 tttgccaagacccggtacccagacatcttcatgagggaagaggtggcactgaaaatcaac 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19 aaacagcgaagggaggaggacgacttttactagggcacagctcgacgttctggaagctctg 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-DEC-1993
                                                                                                                                                                                                                                    02-FEB-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Simeone, A., Acampora, D., Gulisano, M., Stornaluolo, A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              house mouse.
Mus musculus
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        139 ttgccagaatccagggtgcaggtatggtttaagaatcgaagggtaagtg 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 74; DB 82; Length 204;
Pred. No. 8.15e-19;
0; Mismatches 48; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCACAGAAGCCAGAGTGCAGGTTTGGTTCCAGAACCGAAGAGCCAAGTG
                                                                                                                                                                                                                                    ROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A. Simeone, I I G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/dev_stage="11-day old embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MAHOBOXG 949 bp RNA
M.musculus mRNA for homeobox gene.
X59725 M91544 S47170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nature 358 (6388), 687-690 (1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (12-JAN-1993) P
10, 801 25 Napoli, ITALY
2 (bases 1 to 204)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
                                                                                                                                                                                                                           M.musculus Otx2 mRNA.
X68884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 3.1%;
Best Local Similarity 71.8%;
Matches 122; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 204)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..204
                                                                                                                                                                                                                                                                                                                                                 homeobox gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rostral brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      homeobox gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boncinelli, E.
                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                               house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Simeone, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g51361
```

source

FEATURES

CDS

JOURNAL MEDLINE REMARK

COMMENT

TITLE

BASE COUNT ORIGIN

DEFINITION ACCESSION

RESULT

492

ò

g

ò

g ö

ORGANISM

KEYWORDS

ö

Gaps

ö

ö

Gaps

```
/product-homeoprotein 1"
/db_xref-*PiD:g413751"
/translation="MEFLESKFALKSPPSKNSDFYMGTGGALEHVMETLDNESFYGKA
/translation="MEFLESKFALKSPPSKNSDFYMGTIKVEGOPLHTELNRAMOGNNL
TAGKCVQARFOPLPRAEHHVRLDRTSPCQDSSYNNGTIKVEGOPLHTELNRAMOGNNL
RMSPVKGMPEKSELDELGDKCDSNVSSSKRRHRTFTSLQLEELEKVPGKHYPDVY
PROJANKTELTEARNQVWFQNRRAWRKRERYGQIQOAKSHRAATYDISVLPRTDSY
PQIQNNLWAGNTSGSCSVYTSCALPRDASSCHPYSHSPRTDSSYTGESNHONGFGHVP
LNNFFTDSLLTGTTNGHAFETKPEFERRSSSIAVLRWKAKEHTANISWAM"
                                     /product="Cart-1"
/db_xref="PID: 91098654"
/db_xref="PID: 91098654"
/translation="MEFLESEFALKSPPSKNSDFYMGAGGPLEHVMETLDNESFYSKA
/translation="MEFLESEFALKSPPSKNSDFYMGAGGPLEHYMETLDNESFYSKA
SAGKCVQAFGPLPREHYMLERTSPCQDSSYNYGITKVBGQPLHTELMRAMDNCNSL
RMSPVKGMQEKGELDELGBCCDTNVSSSKKRRHRTTFTSLQLEELEKVFQKTHYPDVY
                                                                                                                                              VREOLALRTELTEARVQVWFQNRRAKWRKRERYGGIQQAKSHFAATYDISVLPRTDSY
POLONNLWAGNASGGSVVTSCMLPRDYSSCAMPYSHSPRTDSSYTGFSNHQNOFSHVP
LNNFEDSLLTGATNGHAFETKPEFERRSSSIAVLRWRAKEHTANISWAM"
549..731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA-binding protein; homeoprotein 1; transcription factor.
Rattus norvegicus chondrosarcoma cDNA to mRNA.
Rattus norvegicus
Eukattus norvegicus
Eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cartilage homeoprotein 1, a homeoprotein selectively expressed in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                366 AGAAGAAAACAGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAG 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   426 GCAGTCTTTGCCCAAACACACTACCCAGATGTCTTCACCAGAGAAGAGCTAGCCATGAAA 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-NOV-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600 aaagtettteagaaaacteattaceeggatgtgtatgteagagaacagettgetetgagg
                                                                                                                                                                                                                                                                                                                                                                                                         540 agcagtaagaaacggaggcaccgaaccacttcaccagtttgcagctagaggagctggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rATCARTIX 1760 bp mRNA ROD 02-NOV
Rat cartilage homeoprotein 1 (Cart-1) mRNA, complete cds
L14018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      đe
/note="cartilage-specific homeodomain protein"
                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 1760)
Zhao, G.-Q., Zhou, X., Eberspaecher, H., Solursh, M. and
Crombrugghe, B.
                                                                                                                                                                                                                                                                                                                       Length 1442;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U.S.A. 90, 8633-8637 (1993)
                                                                                                                                                                                                                                                                                                                                                               0; Mismatches 55; Indels
                                                                                                                                                                                                                                                                                                                       Score 72; DB 74;
Pred. No. 7.40e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="chondrosarcoma"
461..1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Rattus norvegicus"
                                                                                                                                                                                                                                  /note="encodes homeodomain"
                                                                                                                                                                                                                                                        358 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /cell_type="chondrocyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               449 g
                                                                                                                                                                                                                                                        328 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           461..1441
/gene="Cart-1"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chondrocytes
Proc. Natl. Acad. Sci.
93391409
                                                                                                                                                                                                                                                                                                                    3.0%;
larity 69.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  441 c
                                                                                                                                                                                                                                                        350 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1..1760
                                                                                                                                                                                                                                                                                                                                  Local Similarity
tes 127; Conserv
                                                                                                                                                                                                                                                        406 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  453
                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aa 721
                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              546
                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  윰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                              /evidence-experimental
//product-=#Hox"
//db_xref="PID:g19584"
//db_xref="PID:g19584"
//translation="MYSSYGHYLEROPALGGRLDSPGNLDTLQAKKNFSVSHLLDLEE
//translation="MYSSYGHYLEROPALGGRLDSPGNLDTLQAKKNFSVSHLLDLEE
SQLQALERVEEKTHYPDFSYREARRYNLTFN
SSQLQALERVFERTHYPDFRPRAPRETDYLSWGTASPYRSSSLPRCCLHEGLHNGF"
313 c 277 g 211 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 (bases 1 to 1442)
Gordon, D.F., Wagner, J., Atkinson, B., Chlono, M., Berry, R., Sikela, J.
and Gutierrez-Hartmann, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSU31986 1442 bp mRNA PRI 26-SEP-1996
Human cartilage-specific homeodomain protein Cart-1 mRNA, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 1442)
Gordon, D.F., Wagner, J., Atkinson, B.L., Chiono, M., Berry, R.,
Sikela, J. and Gutlerrez-Hartmann, A.
Human Cart-1: structural organization, chromosomal localization,
and functional analysis of a cartilage-specific homeodomain cDNA
DNA Cell Biol. 15 (7), 531-541 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (20-JUL-1995), David F. Gordon, Medicine/Endocrinology, University of Colorado Health Sciences Center, 4200 E. Ninth Avenue, Denver, CO 80262, USA Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        454 agaaagcagcagagaaacaggacaacattcaacagcagccaactgcaggccttggagcgt 513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      514 gictitgageggaeaeattaeceggatgetittgitegagaagaietegeaegieggig 573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 369 AGAAAACAGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGCA 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1066;
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 72; DB 85; Length 106
Pred. No. 7.40e-18;
0; Mismatches 59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
                        /organism-"Mus musculus"
                                            /cell_line="C2C12"
/cell_type="myeloblast"
/tissue_lib="C2 gt11"
                                                                                                                              /partial
/evidence=experimental
181..834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /ceil_line="HeLa"
/map="12q21.3-q22"
/chromosome="12"
156..1136
                                                                                                                                                                                            /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                             3.0%;
Best Local Similarity 68.9%;
Matches 131; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         549 ACAGAGAGAG 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             634 aatgagcgag 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       U31986
91098653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96326288
                                                                                                                                                                                                                                                                                                                                                                 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                        Ses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
```

g ð 셤 ð

ò

ö

```
Query Match
Best Local Similarity 68.9%;
                                                                                                                                                                                                                                                                549 ACAGAGAGAG 558
                                                                                                                                                                                                                                                                                                                                                                                              goldfish.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     488
                                                                                                                                                                                                                                                                                                            10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                   셤
                                                                                                                                                                           g
                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                        ð
                                                                                                                                                ô
                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGDNVAAQADESVGEAGRSLLESPGLTSGSDTPQQDNDQLNSEEKKKRKQRRNRTTFN
SSQLQALERVFERTHYPDAFVREDLARRVNLTEARVQVWFQNRRAKFRRNERAMLANK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'translation-"MTSSYGHVLERQPALGGRLDSPGNLDTLQAKKNFSVSHLLDLEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NASLLKSYSGDVTAVEQPIVPRPAPRPTDYLSWGTASFYRSSSLPRCCLHEGLHNGF" order(1262,1438,1620,1692)
/note="introns appear at these places in the genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 3359)
Kern,M.J., Argao,E.A., Birkenmeier,E.H., Rowe,L.B. and Potter,S.S.
Genomic organization and chromosome localization of the murine
                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (01-DEC-1993) Michael J Kern, Basic Science Research, Childrens Hospital, Research Foundation, 3333 Burnet Ave, Cincinnati, OH 45229-3039, USA
Location/Qualiflers
                                                                                                                                                                        965 acggagctcactgaggccagggtccaggtttggtttcaaaatcgaagggccaagtggaga 1024
                                                                        905 aaggtettecaaaaaaggattaeceggatgtatatgteagagaacagettgeaetgaga 964
                                                                                                                                        426 GCAGTCTTTGCCCAAACACACTACCCAGATGTCTTCACCAGAGAAGAGCTAGCCATGAAA 485
                                                                                                                                                                                                     486 ATAMACCTCACAGAGCCAGAGTGCAGGTTTGGTTCCAGAACCGAAGAGCCAAGTGGAGG 545
                                                         845 agcagcaaaaagaggagacaccgaactacgttcaccagtttgcagctagaggaactagag 904
                                                                                                                                                                                                                                                                                                                          16-MAR-1994
                               Gaps
                               ö
   Length 1760;
Score 72; DB 86; Length 176
Pred. No. 7.40e-18;
0; Mismatches 58; Indels
                                                                                                                                                                                                                                                                                                                        mRNA ROD (Pmx) mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="stem 19/20 bp and loop 13 bp" 2916
3111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ų
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="homeobox protein"
/db_xref="PID:9460125"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                homeobox gene Pmx
Genomics 19 (2), 334-340 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /codon_start=1
                                                                                                                                                                                                                                                                                                                 Mus musculus homeobox 003873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1..1021
1022..1675
/gene="Pmx"
Query Match 3.0%;
Best Local Similarity 69.1%;
Matches 130; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 (bases 1 to 3359)
Kern, M.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..3359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2665..2717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                771 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sednence
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                house mouse.
                                                                                                                                                                                                                                1025 aaaagaga 1032
                                                                                                                                                                                                                                                               546 AAGACAGA 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94245205
                                                                                                                                                                                                                                                                                                                                                                 9460124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polyA_signal
polyA_signal
BASE COUNT 891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polyA_signal
polyA_signal
polyA_signal
polyA_signal
polyA_signal
stem_loop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                         σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5'UTR
CDS
                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                    esūrt
                                                                                                                                                                                                                             .
සු
                                                         셤
                                                                                     ð
                                                                                                                 a
                                                                                                                                             ð
                                                                                                                                                                        음
                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                               ð
```

```
/product-"homeobox protein"
/db_xref-"PID:9460928"
/db_xref-"PID:9460928"
/tb_xref-"PID:9460928"
/translation-"MTGREBAIDERPRYKLYPSFGIDKARLNGSGFRSKGFAITDLLG
IESDLQPHQSGGAGANGEGGSAALGGFAFGGSLPIGLGFLCSLAAQQPPGAPCFLG
SHIPPLLQPRPESHPWONLEQQROAYSDDCLGSGDRNDGKNSOKRKRRHRTVFSHQL
EELEKAFHEAHYPDVYAREMLAMKTELPEDRIQVWFQNRRAKWRREKCWGRSSVWAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Schechter, N. homesbox gene in normal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YGLYCAMVRHSIPLPESIINSAKNGMMGSCAPWILGEPAGMHKKSLEIGKNPPGTPES
THSDSYSEEHKVKDSDTTWSSGANGADDSEDMAIDLSSTSKQESKSTLKRSPPHTEDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Ostariophysi; Cypriniformes; Cyprinoidea; Cyprinidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
Submitted (23-FEB-1994) Edward M. Levine, Health Sciences Center,
SUNY at Stony Brook, Stony Brook, NY 11794, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                     1295 agaaagcagcggagaaacaggacaacattcaacagcagccaactgcaggccttggagcgt 1354
                                                                                                                                                                                                             1355 gictitgagcggacacattacccggatgcttttgttcgagaagatctcgcacgtcgggtg 1414
                                                                                                                                                                                                                                               429 GTCTTTGCCCAAACACACACACAGATGTCTTCACCAGAGAAGAGCTAGCCATGAAATA 488
                                                                                                                                                          369 AGAAAACAGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGCA 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             369 AGAAAACAGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGCA 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gccttccatgaagcacactatccagatgtttacgcaagagaaatgctggccatgaagaca 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             465 aggaaaaagcgaaggcacaggacagtctttacctcacatcaacttgaggaactggagaaa 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAU07056 1588 bp mRNA VRT 22-OCT-1994
Carassius auratus homeobox protein mRNA, complete cds.
U07056
9460927
                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 71; DB 49; Length 1588;
Pred. No. 2.22e-17;
0; Mismatches 58; Indels
Length 3359;
Score 72; DB 82; Length 335
Pred. No. 7.40e-18;
0; Mismatches 59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 1588)
Levine, E.M., Hitchcock, P.F., Glasgow, E. and :
Restricted expression of a new paired-class !
and regenerating adult goldfish retina
J. Comp. Neurol. 348 (4), 596-606 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         auratus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         398 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="retina"
/dev_stage="adult"
30..1055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism-"Carassius
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   373 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 (bases 1 to 1588)
Levine, E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 2.9%;
Best Local Similarity 69.0%;
Matches 129; Conservative
                                                     131; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   329 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Carassius auratus
                                                                                                                                                                                                                                                                                                                                                                                                                                  1475 aatgagcgag 1484
```

29-MAR-1996

გ ò . යු ò DEFINITION ACCESSION

Ä

KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS TITLE JOURNAL

REFERENCE AUTHORS

TITLE

Ξ

RESULT

```
Submitted (10-JUN-1994) F. Meijlink, Netherlands Inst. for
Developmental, Biology, Hubrecht Laboratory, Uppsalalaan 8, 3584 CT
Utrecht, NETHERLANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref-"PID:958377"
/translation-"ESLSPSROVARKKKORRNRTTFNSGOLGALERVFERTHYPDAF
/translation-"ESLSPSROVARTORNERAFTRNERAMILANESASILKSYSGEAAIEOPMAP
RPTALSPEYLSWSSSSPYSTVPSYSSSGTATAAQGVNMANSIASLRIKAKEFSLHQNO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism-"Gallus gallus"
Adv_stage="10 days"
/clone_lib="lambda gil chicken embryō libraries one from Clontech and one from Karolinska Institute"
                                                                                                                                                                                                                          Leussink, B., Brouwer, A., el Khattabi, M., Poelmann, R.E., Gittenberger-de Groot, A.C. and Meijlink, F. Expression patterns of the paired-related homeobox genes MHox/Prxl and S8/Prx2 suggest roles in development of the heart and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The expression pattern of the chick homeobox gene gMHox suggests role in patterning of the limbs and face and in compartmentalization of somites
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gallus sp.
Unclassified.
1 (bases 1 to 895)
Kuratani,S., Martin,J.F., Wawersik,S., Lilly,B., Eichele,G. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              องรบชช 895 bp mRNA VRT 22-SEP-1994
gWHOx-homeobox [chickens, stage 17 embryo, heart, mRNA, 895 nt]
569088
g545359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             43 aaacagaggaaggaaccgcaccacattcaacagcagccaactgcaggctctggagagggtc 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               372 AAACAGGGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGCAGTC 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Archosauria; Aves; Neognathae; Galliformes;
Phasianidae; Phasianinae; Gallus
1 (bases 1 to 849)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 849;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 1.98e-16;
0; Mismatches 50; Indels
    VRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 69; DB 50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           153 t
                                                                                                                                                                                                                                                                                                                              Mech. Dev. 52 (1), 51-64 (1995)
96076127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     embryo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
      RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="Prx-2 (S8)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           222
                 G.gallus Prx-2 (S8) mRNA.
X79695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     chickens heart stage 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start=1
      849 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 70.4%;
Matches 119; Conservative
                                                                                                                                                                                                                                                                                                                                                                     2 (bases 1 to 849)
Meijlink, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           266 c
                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1..849
                                                                                                                            Gallus gallus
                                                                                     Prx-2 dene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Olson, E.N.
                                                                                                                                                                                                                                                                                                                 forebrain
                                                                9558376
                                                                                                        chicken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                     DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                      MEDLINE
                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NID
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="PID:9587456"
/translation="MAPMDPERCAPFAVGPAAGPYAAAGDEPGPOGTSDASPHLHPA
PARGPRLSRFPACGPLEPYTPEPAKTYLODLGPAPVLNGGHFYEGPAEAEEKASK
PARGPCLPVDCRGGPRDGPSRVQGSPGPCLASLRVPLSPGLPDTMELAKSKGSKRRNR
TTFSTFQLEELEKVFQKTHYPDVYAREQLALRTDLTEARVQVWFQNRRAKWRERYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KMQEGRNPFTTAYDISVLPRTDSHPQLQNSLWPGSGSGSPGGPCLMSPEGIPSPCMSP
YSHSHGNVAGFMGVPASPAAHPGIYSIHGFPPALGGHSFEPSPDGDYKSPSLVSLRVK
                                                                                                                                                                                                                                                                                                       9387455
alx3 gene.
glolden hamster.
Mesocricetus auratus
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
Cloctinae; Mesocricetus.
1. (bases 1 to 1744)
German, M.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
Submitted (05-SEP-1994) M.S. German, HORMONE RESESEARCH INST.,
UNIVERSTIY OF CALIFORNIA SAN FRANCISCO, HSW 1090, BOX 0534, SAN
FRANCISCO, CA 94143-0534, USA
2 (bases 1 to 1744)
                                      429 GICTITGCCCAAACACACTACCCAGATGTCTTCACCAGAGAGAGGCTAGCCATGAAAATA 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480 agcaagaagcgtcggaaccgcacaaccttcagcacattccagctggaagagctggagaaa 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     369 AGAAAACAGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGCA 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540 gicticcagaaaacccactacccggacgigitatgcccgagagcagctggctttacgcacg 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rudnick, A., Ling, T.T., Odagiri, H., Rutter, W.J. and German, M.S. Pancreatic beta cells express a diverse set of homeobox genes Proc. Natl. Acad. Sci. U.S.A. 91 (25), 12203-12207 (1994)
                                                                                                                                                                                                                                                 30-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 70; DB 81; Length 1744;
Pred. No. 6.65e-17;
0; Mismatches 55; Indels
                                                                                                                                                                                                                                                   ROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mesocricetus auratus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="pancreatic islet"
/cell_type="beta-cell"
/cell_line="HIT-T15.M2.2.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   348 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="MG 1343.1"
/clone_lib="lambda gtll"
21..1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
1..1744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             472 g
                                                                                                                                                                                                                                                   RNA
                                                                                                                                                                                                                                           M.auratus mRNA for alx3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="alx3"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PKEPPSLLNWTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 2.9%;
Best Local Similarity 69.4%;
Matches 125; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 559 c
                                                                                                                       645 agggaga 651
                                                                                                                                                                549 ACAGAGA 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95083670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 365
```

source

CDS

BASE COUNT

OREGIN

용

셤 ò 8

ö

JOURNAL MEDLINE FEATURES

ö

Gaps

ö

فالتفريق والمتعاور والماروي بالماروي

Ø

12

RESULT

```
/product="paired-related homeotic gene product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism-"Xenopus laevis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product-"orthodenticle 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                            317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 278
                                                                                                                                          /gene="Prx-1"
/note="homeobox"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 1264)
Blitz, I.L. and Cho, K.W.Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YKDQTSSWKFQVL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1264 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 of 2
African clawed frog.
                                                                                                                                                                                                                             Query Match 2.8%;
Best Local Similarity 69.9%;
Matches 121; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 366 c
                                                                                                                                                                            337 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xenopus laevis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ಹ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         XLXOTX2S1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 335
                                                                                                                                                                             258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g644779
                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3'UTR
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
SEGMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ó
                                                                                                                   /organism="Gallus sp."
31..768
/gene="gMHox"
/note="Description: homeobox; homeodomain protein; Method:
                                                                                                                                                                                                                                           /db_xxeff="PID:g545360"
/translation="MASSYAHAMERQALLPARLDGPAGLDNLQAKKNFSVSHLLDLEE
AGDWVAAQGDEGGGPGRSLLESPGLTSGSDTPQQDNDQLNSEEKKKRRQRRNRTTFN
                                                                                                                                                                                                                                                                                             SSOLOALERVFERTHYPDAFVREDLARRVNLTEARVOWFONRRAKFRRNERAMLASK
NASLLKSYSGDVTAVEOPIVPRPAPRPTDYLSWGTASPYSAMATYSTTCTNASPAQGM
NMANSIANLRLKAKEYSLQRNQVPTVN"
                                                                                                                                                                                          conceptual translation supplied by author. This sequence comes from Fig. 1A"
                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ., Koyama, E., Myokai, F., Taniguchi, S., Ohuchi, H., Saito, T.
                                     GenBank staff at the National Library of Medicine created this entry [NCBI glabsq 14437] from the original journal article. This sequence comes from Fig. 1A.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  363 ggtctttgagaggacacactaccccgatgcctttgtacgggaagaccttgcacgcagagt 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  368 AAGAAAACAGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGC 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gallus gallus (library: lambda gt10) stage 24-26 cDNA to mRNA, clones p2 and p7.
Gallus gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHKPRX1 1084 bp mRNA VRT 10-SEP-1993 Gallus gallus paired-related homeobox mRNA, complete cds. D13433
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         428 AGTCTTTGCCCAAACACACTACCCAGATGTCTTCACCAGAGAAGAGCTAGCCATGAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The chicken homeobox gene related to Drosophila paired is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae; Gallus.

1 (bases I to 1084)
Nohno,T., Koyama,E., Myokai,F., Taniquchi,S., Ohuchi H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     423 caacctcactgaagccagagttcaggtgtgttccagaaccggagggccaagt 475
                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         488 AAACCTCACAGAAGCCAGAGTGCAGGTTTGGTTCCAGAACCGAAGAGCCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                  Score 67; DB 51; Length 895;
                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches 53; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (20-OCT-1992) to DDBJ by: Tsutomu Nohno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 predominantly expressed in the developing limb
Dev. Biol. 158, 254-264 (1993)
93321789
                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 1.75e-15;
                                                                                                                                                                                                                                                                                                                                                 140
Dev. Biol. 161 (2), 357-369 (1994)
94148118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                 246 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Gallus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of Pharmacology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              paired-related homeobox.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="Prx-1"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kawasaki Medical School
                                                                                                                                                                                                                             /codon_start=]
                                                                                                                                                                                                                                                                                                                                                                                               Match 2.8%;
Local Similarity 69.4%;
les 120; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        086-462-1111
086-462-1199
                                                                                                                                                                                                                                                                                                                                                 255 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               233..967
                                                                                                     1..895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kurashiki 701-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      577 Matsushima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Department
                                                                                                                                                                                                                                                                                                                                                 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9222850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and Noj
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
NID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                          source
                                                                                                                                                                                                                                                                                                                                             ASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
     Journal
Medline
Remark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TÎTLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
```

```
/db_xref="Pid:g22851"
/db_xref="Pid:g22851"
/db_xref="Pid:g22851"
/db_xref="Pid:g22851"
/dcasslation="MASSYRARMEROALLPARLOGPAGLONICARKRESORHLIDLEE
/dcasslation="MASSYRARMEROALLPARLOGPAGLONICARKRESORHLIDLEE
/dcassref="Massyrarmeroal">dcassyrarmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmeroalmero
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="PID:g644782"
/translation="MMSYLKQPPYAVNGLSLTTSGMDLLHPSVGYPATPRKORRERTT
FTRAQLDILEALFAKTRYPDIFMREEVALKINLPESRVQVWFKNRRAKCRQQQQQON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gastrulation:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGONKVRPSKKKTSPAREVSSESGTSGQFSPPCSTSGPVISSSTAPVSIWSPÄSISPL
SDPLSTSSSCWQRSYPWTYTQASGYSQGYASSTSYFGGMDCGSYLTPWHHQLSGPGAT
LSPWSTNAVTSHLNQSQAALSSQAYGASSLGFNSTADCLDYKDQTASWKLNFNADCLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea;
Pipidae; Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
Submitted (12-0AN-1995) Ira Blitz, Developmental and Cell Biolo
and the Developmental Biology Center, University of California,
Irvine, CA 92717-2300, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      368 AAGAAAACAGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGC 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 565 ggtctttgagaggacacactacccgatgcctttgtacgggaagaccttgcacgcagagt 624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <1. 212
213.104
213.1042
/gene="XOKX2"
/note="misexpression of XOKX2 induces ectopic cement
glands; homeodomain protein"</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xenopus laevis homeobox protein orthodenticle 2 (Xotx2) mRNA, COMplete cds. U19813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   428 AGTCTTTGCCCAAACACACTACCCAGATGTCTTCACCAGAGAAGAGCTAGCCATGAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anterior neurectoderm is progressively induced during
the role of the Xenopus homeobox gene orthodenticle
Development (1995) In press
(bases 1 to 1264)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1084;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               625 caacctcactgaagccagagttcaggtgtggttccagaaccggagagccaagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 488 AAACCTCACAGAAGCCAGAGTGCAGGTTTGGTTCCAGAACCGAAGAGCCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 69; DB 49; Length 108
Pred. No. 1.98e-16;
0; Mismatches 52; Indels
```

```
ORIGIN
```

Query Match 2.8%; Score 67; DB 51; Length 1264; Best Local Similarity 69.4%; Pred. No. 1.75e-15; Matches 120; Conservative 0; Mismatches 53; Indels (

ö 0; Gaps

₽.

ò

윱

ð

'earch completed: Fr1 May 30 16:00:04 1997

```
1.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Statistics:
Database:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fri May 30 16:06:24 1997; MasPar time 1700.26 Seconds 912.837 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   154:EST154
159:EST159
164:EST164
169:EST169
174:EST174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                n.a. - n.a. database search, using Smith-Waterman algorithm
                                                                                                                                                                                                                                                                                                                                                                                          Release 2.1D John F. Collins, Biocomputing Research Unit. Copyright (c) 1993, 1994, 1995 University of Edinburgh, U.K. Distribution rights by IntelliGenetics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           167:EST167 168:EST168
172:EST172 173:EST173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27 EST27 28:EST28 29:EST29 30:EST30 313:EST33 34:EST24 35:EST35 36:EST36 37:2333 34:EST34 45:EST40 41:EST41 48:EST48 45:EST48 45:EST48 46:EST46 47:EST47 48:EST48 45:EST55 56:EST55 56:EST56 56:EST56 66:EST56 66:EST56 66:EST56 66:EST56 67:EST77 78:EST77 77:EST77 78:EST77 79:EST78 79:EST88 79:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .32:EST132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37:EST137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   47:EST147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     >US-08-701-278-1
(1-2424) from US08701278.seq
2424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  886179 seqs, 320143548 bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum Match 0%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100:EST100 101:EST101 1 105:EST105 106:EST105 1106:EST105 111:EST111 115:EST115 116:EST115 1120:EST125 126:EST125 1130:EST130 131:EST131 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         170:EST170 171:EST171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dbase 0; Query 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TABLE default
Gap 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        dbular output not generated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Description:
Perfect Score:
N.A. Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nmatch STD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Comp:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MPsrch_nn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :uo uı,
```

```
175:EST175 176:EST176 177:EST177 178:EST178 179:EST179
180:EST180 181:EST181 182:EST182 183:EST183 184:EST184
185:EST182 186:EST186 187:EST187 188:EST188 184:EST184
185:EST182 186:EST186 187:EST187 188:EST188 189:EST189
190:EST190 191:EST191 192:EST192 193:EST193
EST-STS-THREE
194:STS1 195:STS2 196:STS3 197:STS4 198:STS5 199:STS6
200:STS7 201:STS2 202:STS9 203:STS10 204:STS1 205:STS12
206:GREST1 207:GREST2 208:GREST3 209:GREST9 215:GREST5
211:GREST1 207:GREST2 218:GREST3 219:GREST4 210:GREST5
216:GREST1 217:GREST2 218:GREST3 219:GREST4 220:GREST2
225:GREST3 221:GREST1 218:GREST3 219:GREST3 23:GREST1 23:GREST3 23:GREST1 23:GREST3 23:GREST1 23:GREST1 23:GREST3 23:GREST1 23:GREST2 24:GREST2 24:GREST2
```

# cs: Mean 12.474; Variance 4.448; scale 2.805

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

9th DB ID Description		red. N	2 7 0	4.13E-4	3.456-4	N 3.45e-4	e 3.10e-	s 2.94e-3	.92e-	1.92e-2	.92e-2	1.71e-2	1.71e-2	51e-2	1.12e-2	7.98e-	es 7.98e-2	ou 3.39e-1	e 5.36e-18	e 5.36e-	2.63e-15	2.63e-1	2.63e-	2.63e-1	en 2.00e-1	2.00e-1	u 1.50e	1.50e-13	1 730-	730-08 0 1 730-08	2.5	-e 2.63e-0	.63e-	e 2.63e-	e 1.73e-08	.73e-0	2.63e	2.63e-0	ne 2.63e-	3 1.73e-0	73e-0	×	.73e-0i	73e-0	3е-
9th DB ID 498 26 AA022576 498 219 W22594 829 186 W22594 829 186 W22594 829 186 W22594 829 186 W22594 824 125 R95996 821 WA33310 824 125 R95996 821 WA33310 824 125 R95996 821 WA3310 832 1249 SSCIEII 832 1249 W31936 833 134 AA059929 833 135 A44124 848 270 W34124 848 821 W39100 833 185 W18334 848 821 W39100 833 185 W19336 833 185 W19236 833 185 W19236 833 164 W34141 836 96 W3566 833 164 W34141 836 96 W3566 833 164 W34141 836 42 G14283 832 124 WMA510 833 164 W34141 836 42 G14283 832 124 WM48110 833 164 W34141 836 42 G14283 832 124 WM48110 833 164 W38110 833 164 W38110 833 164 W38110 834 124 W48110 836 186 W48910 838 144 27		- 1	677010 th 010000	/zeiu.ri soares i	Human retina	5 Human retina	3c02.rl Homto sa	37078 Homo sapi	5q03.rl Soares	26q03.rl Soar	f81d10.rl Soares	Se05.rl Soares	2e05.rl Soares	e72e10.sl Soares f	49b07.rl Soares	crofa mRNA; ex	crofa mR	3dll.rl Soares	108.sl Homo sap	la08.sl Homo sa	103.rl Soares m	5d03.rl Soares	3b03.rl Soares	3b03.rl Soares	a08.rl Soares	a08.rl Soares	#08.rl Soares	i2Zg08.rl Soares m	0100.11 Source	153408 rl Homo san	102000:II nomo sap	Human aorta cDNA 5	06.rl Soares	p58g02.rl Homo sa	y60f09.rl Homo sa	mb81f03.rl Soares	CDNA, partia	9.rl Stra	09.rl Stratag	1 STS SHGC-57	fetal brain	n fetal brain	11.rl Life Te	fetal brain	fetal brain
19		ID	7300044	10770	מ ו	25	59	9	3310	310	306			57		딜	딥		2	8	9339	992	33	33	112	1124	A3294	40	M//302	W19430	C16221			3801	9226	77	900	A06710	210	0762	428	m	_	1442	HSC3947
14 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -		a :	•							m	8	æ	-	56	$\sim$	0	4	œ	7	-	m	*	æ	$\overline{}$	2	æ	4	w t	۰ ٥	ט ט	<b>۳</b> د	(1)	7	40	96	ò	~	16	4	9	42	3	168	43	237
		eng	007	n	<b>.</b>	σ	4	w	~	N	604	424	424	513	439	372	372	309	488	488	303	303	323	323	448	448	154	154	7/1	2,0	260	260	273	274	306	327	332	335	335	337	392	392	400	428	430
200 200 200 200 200 200 200 200 200 200	% Query	Match		٠	٠	٠	•	٠	٠	٠	٠			•	•		•	•	•	٠	٠	•	٠	٠	•	٠	•	٠	٠	•	٠			•	•	•	•	٠	•	٠	٠	•	٠	•	•
0   0   0   1		COL	36	0 :	1/	71	61	9	55	55	55	54	54	53	51	49	49	45	47	47	44	44	44	44	43	43	42	7.5	9 6	9 4	3.7	37	37	37	36	36	37	. 37	37	36	36	36	36	36	37
NZ NZ 101 101 101 101 101 101 101 101 101 10				٠,	7	m	4	'n	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	52	9 6	, c	9 6	30	31	32	33	34	35	36	37	38	39	40	41	42	43
8 ,000 000 0000000000000000000000000000	Res			ပ	O	ບ												υ	υ	U										c	י כ	ט	U	υ	υ	ပ	O	U	υ	υ					

N

```
236 gcacatctagctgcgcccgagtgaacgtcgtcctcccggngctgttt 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI gi: 1299427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .829
                                                                                              458 cgctgctttct 468
                                                                                                                                   379 CGCTGTTTTCT 369
                                                                                                                                                                                                                                                                                                                                               Homo saptens
                                                                                                                                                                                                                                                                                      g1299427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          155
                                                                                                                                                                                                                                                                     W22594
                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                            7
                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                              g
                                                          S
                                                                                                                                   å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 අ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ვ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        გ
                                                                                                                             AA022576 498 bp mRNA EST 09-AUG-1996
ze72610.rl Soares fetal heart NDHH19W Homo sapiens cDNA clone
3465454 5' similar to SW:WHOX_MOUSE Q02810 HOMEOBOX PROTEIN MHOX.;;
91486693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into (Pharmacia). Library went through one round of normalization to a Cot = 5. Library constructed by M.Fatima Bonaldo. This library was constructed from the Same fetus as the fetal lung library, Soares fetal lung
   Human fetal brain cDN 2.63e-09
zn71g01.s1 Stratagene 1.73e-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Possible reversed clone: similarity on wrong strand
Seg primer: -28M13 rev2 from Amersham
High quality sequence stop: 478.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       278 ctctctcattcctgcggaacttggctcttcggttctgaaaccacacctgcactctcgcct 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    558 CTCTCTCTCTCTTCCTCCACTTGGCTCTTCGGTTCTGGAACCAAACCTGCACTCTGGCTT 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  338 cggtgaggttcaccccggcgggcaaggtcttctcgcacaaaagcatcaggatagtgtgtc 397
                                                                                                                                                                                                                                                                                 Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutherla; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 498) Hiller,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Hultman,M., Hultman,M., Rucaba,T., Le,M., Leonon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Materston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Wilson RK
WashU-Merck EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 76; DB 26; Length 498;
Pred. No. 2.79e-46;
0; Mismatches 54; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage="19 weeks"
/lab_host="DH10B (ampicillin resistant)"
<1...>498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib="Soares fetal heart NbHH19W"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            123 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
                                                                            ALIGNMENTS
430 43 C14394
491 233 HSAA1273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          140 g
                                                                                                                                                                                                                                                                                                                                                                                                                                      The WashU-Merck EST Project Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="364554"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /sex="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 3.1%;
Best Local Similarity 71.2%;
Matches 136; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            122 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1,.498
                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          111
                                                                                                                                                                                                                                                 human.
 37
                                                                                                                                                                                                                        KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
COMMENT
                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
```

```
/note="Organ: eye; Vector: lambda gt10; Site_1: EcoRI; Site_2: EcoRI; The library used for sequencing was a sublibrary derived from a human retina cDNA library. Inserts from retina cDNA library DNA were isolated, cleaved with Tsp5091, Size selected, and cloned into lambda gt10. Individual plaques were arrayed and used as templates for PR amplification and these PCR products were used for sequencing."
                                                                                                                                                                                                                                             W22594 829 bp mRNA EST 06-MAY-1996
70B5 Human retina cDNA Tsp5091-cleaved sublibrary Homo sapiens cDNA
not directional.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="Human retina cDNA Tsp5091-cleaved sublibrary"
/sex="mixed (males and females)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
116 acttagetettegattettaaaccatacetgeaccetegactegggeangttgattttea 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryotze; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutherla; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 829)
Macke, J., Smallwood, P. and Nathans, J.
Adult Human Retina cDNA.
Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dept. of Molecular Biology and Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 829;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches 50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Dr. Jeremy Nathans
Dr. Jeremy Nathans, Dept. of Molecular Biolo
Johns Hopkins School of Medicine
725 North Wolfe Street, Baltimore, MD 21205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: 410 955 4678
Fax: 410 614 0827
Email: jeremy_nathans@qmail.bs.jhu.edu
Clones from this library are NOT available.
PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FORWARD: CTTTTGAGCAAGTTCAGCCTGGTTAAGT
BACKWARD: GAGGTGGCTTATGAGTATTTCTTCCAGGGTAA
Seq primer: GGGTAAAAAGCAAAAGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 71; DB 219;
Pred. No. 3.45e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="retina"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   218 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.9%;
Best Local Similarity 70.4%;
Matches 119; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        184 c
```

SECTION SHAPE

DEFINITION

g

ACCESSION KEYWORDS ORGANISM

SOURCE

REFERENCE AUTHORS TITLE JOURNAL

```
Eucaryotae; Metazoa; Chordata; Vertebrata; Gnathostomata; Mammalia;
                                                             Deuterostomia; Chordata; Vertebrata; Gnathostomata; Ostelchthyes; Sarcopterygii; Choanata; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Archorda; Primates; Catarrhini; Hominidae; Homo.

(bases 1 to 324)
Hiller,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Rouchan, M., Rucaba,T., E.M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rouching,T., Scares,M., Tan,F., Treyaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human clone-HIBBQ26 library-Infant brain, Bento Soares primer-M13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     367 GAAGAAAACAGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGG 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22 gaagcgnaangcaaagaaatagaacatcctttacccaagagcaaattgaggccctggaga 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Wilson RK
WashU-Merck EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           end similar
                                                                                                                                                                                                                                                                             Eukaryotae; Metazoa; Eumetazoa; Bilateria; Coelomata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   386 bp mRNA EST
CCUIOTHOMD Sapiens CDNA clone HIBBQ26 5'
TO9185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. 3.10e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 61; DB 125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"/clone="230882"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: est@watson.wustl.edu
High quality sequence stops: 180
Source: IMAGE Consortium, LLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    71 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9390213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Reverse
  R95996
g981656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
    ACCESSION
                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="Organ: eye; Vector: lambda gt10; Site_1: EcoRI; Site_2: EcoRI; The library used for sequencing was a sublibrary derived from a human retina cDNA library. Inserts from retina cDNA library DNA were isolated, cleaved with Tsp5091, size selected, and cloned into lamda gt10. Individual plaques were arrayed and used as templates for Era maplification and these PCR products were used for sequencing."
                                                                                   W22594 829 bp mRNA EST 06-MAY-1996
70B5 Human retina cDNA Tsp509I-cleaved sublibrary Homo sapiens cDNA
not directional.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="Human retina cDNA Tsp5091-cleaved sublibrary"
/sex="mixed (males and females)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         yt83c02.rl Homo sapiens cDNA clone 230882 5' similar to qb:M93650 PAIRED BOX PROTEIN PAX-6 (HUMAN);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     176 gigocacotocicycaigaagaigtetoigggiacegggcaaacagigcitcca 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               116 acttagctcttcgattcttaaaccatacctgcaccctcgactcgggcangttgattttca 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540 ACTIGGCICITCGGITCIGGAACCAAACCIGCACTCIGGCTICIGIGAGGITTATTITCA 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                          Eukaryotae, mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo. I (bases 1 to 829)
Macke, J., Smallwood, P. and Nathans, J.
Adult Human Retlina cDNA
Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                              Dr. Jeremy Nathans, Dept. of Molecular Biology and Genetics
Johns Hopkins School of Medicine
725 North Wolfe Street, Baltimore, MD 21205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 71; DB 186; Length 829;
Pred. No. 3.45e-41;
0; Mismatches 50; Indels
236 gcacatctagctgcgcccgagtgaacgtcgtcctctcccggngctgttt 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: jeremy_nathans@qmail.bs.jhu.edu
Clones from this library are NOT available.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FORWARD: CTTTTGAGCAAGTTCAGCCTGGTTAAGT
BACKWARD: GAGGTGGCTTATGAGTATTTCTTCCAGGGTAA
Seq primer: GGGTAAAAAGCAAAAGAATT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="retina"
/dev_stage="adult"
/lab_host="E. coli strain K802"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    194 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  218 g
                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Dr. Jeremy Nathans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 2.9%;
Best Local Similarity 70.4%;
Matches 119; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 410 955 4678
Fax: 410 614 0827
                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRimers
                                                                                                                                                                                           g1299427
                                                                                                                                                                                                                                       human.
```

source

FEATURES

ö

Gaps

ö

mRNA ..SE COUNT ORIGIN

გ 셤 S, 윱 DEFINITION

RESULT

03-AUG-1993

```
Length 572;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   230 ctcagtgaggcacgtgtccaagtctggttccagaaccgccgtgccaagt 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 2.3%; Score 55; DB 240; Length 57
Best Local Similarity 66.3%; Pred. No. 1.92e-25;
Matches 112; Conservative 0; Mismatches 57; Indels
                                                                                                                                                                                                                                  Seq primer: -28M13 rev2 from Amersham High quality sequence stop: 464.
Location/Qualifiers
1.572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                       /tissue_type="embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MOUSE);.
AA033108
g1504502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; 1st strand cDNA
Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 386)
Adams, M.D., Soares, M.B., Kerlavage, A.R., Fields, C. and Venter, J.C.
Rapid Cobna sequencing (expressed sequence tags) from a
directionally cloned human infant brain cbNA library
Nature Genet. 4, 373-380 (1993)
                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                      acccattatccagatgtgtttgcccgagaaagactagcagccaaaatagatctacctgaa 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                         381 AGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGCAGTCTTTGCCCAA 440
                                                                                                                                                                                                                                                                                                                                                                          agaaatagaacatcctttacccaagagcaaattgaggccctggagaaagagtttgagaga 77
                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mashington University School of Medicinep 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108 Tel: 314 286 1800 Fax: 314 286 1810 Email: mousest@watson.wustl.edu.This clone is available croyalty-free through LiML; contact the IMAGE Consortium (info@lmage.llnl.gov) for further information. MGI:278508 Seq primer: -28Ml3 rev2 from Amersham High quality sequence stop: 464.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Marra M., Hillier L., Allen M., Bowles M., Dietrich N.,
Dubuque T., Geisel S., Kucaba T., Lacy M., Le M., Martin J.,
Morris M., Schellenberg K., Steptoe M., Tan F., Underwood K.,
Moore B., Thelsing B., Wylle T., Lennon G., Soares B., Wilson R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      91504502
24-AUG-1996 (Rel. 49, Created)
24-AUG-1996 (Rel. 49, Last updated, Version 1)
m126903.rl Soares mouse embryo NbME13.5 14.5 Mus musculus cDNA
clone 464692 5' similar to gb:X52875 Mouse homeobox gene S8 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Marra M/Mouse EST Project WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Animalia; Metazoa, Chordata, Vertebrata, Mammalia,
Theria, Eutheria, Rodentia, Myomorpha; Muridae, Murinae.
                                                                                                                                                                                                                                                                                                              Length 386;
                                                                                                                                                                                                                                                                  5 others
                                                                                                                                                                                                                                                                                                           Score 60; DB 131; Length 38
Pred. No. 2.94e-30;
0; Mismatches 52; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gcaagaatacaggtatggttttctaatcgaagggccaaatggag 181
                                                                                                    Contact: Adams, MD
The Institute for Genomic Research
932 Clopper Road, Gaithersburg, MD 20878
Tel: 3018699056
Fax: 3018699423
Email: mdadams@tigr.org.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ų
                                                                                                                                                                                                                                                               77
                                                                                                                                                                                                                                /organism="Homo sapiens"
/clone="HIBBQ26"
98 c 80 g 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1..572
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Waterston R.;
"The WashU-HHMI Mouse EST Project";
                                                                                                                                                                                                                                                               80 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard; RNA; EST; 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /strain="C57BL/6J
                                                                                                                                                                                                                                                                                                           Query Match 2.5%;
Best Local Similarity 68.3%;
Matches 112; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (mouse)
                                                                                                                                                                                                                                                                  ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LT 6
MMA33108
AA033108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (MOUSE);
                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                             AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                      78
                                                                                                                                                                                                                                                                                                                                                                          18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   138
                REFERENCE
                                                                          JOURNAL
                                                                                                                                                                                                   FEATURES
                                                                                          COMMENT
```

윱 ö 셤 ò

ð

```
T 3'], on equal amounts ofmRNA from 2 13.5dpc and 2 14.5dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 572)
Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Inderwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Schegs, B., Wilson, R. and
                                                                                                                                                                              adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of themodified pTYT3 vector. Library went through one round of normalization, and was constructed by Bento Soares and M.Fatima Bonaldo."
//clone_1464692"
//clone_11b="Soares mouse embryo NbME13.5 14.5"
                                                                         embryos [total RNA provided by Minoru Ko, Wayne State Univ., from 2 ]; double-stranded cDNA was ligated to Eco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA033108 572 bp mRNA EST 22-AUG-1996 mi26903.rl Soares mouse embryo NbME13.5 14.5 Mus musculus cDNA clone 464692 5' similar to gb:x52875 Mouse homeobox gene S8 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      372 AAACAGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGCAGTC 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
```

... is a collection for the confedition

US-08-701-278-1.rst

```
Seg primer: -28M13 rev2 from Amersham
High quality sequence stop: 460.
Location/Qualiflers
                                                                                                                                                                                                                                                                                                                                                                                             102 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Marra M/Mouse EST Project
                                             1..604
/organism="Mus musculus"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Waterston, R.
The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                             171 g
                                                                                                                                                                                                                                                                M.Fatima Bonaldo."
/clone="420691"
                                                                                                                                                                                                                                                                                                                                                              /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                  /sex-"unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                         2.3%;
Similarity 66.3%;
112; Conservative
                                                                                                                                                                                                                                                                                                                                                                                <1..>604
200 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g1292374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W17990
                                                                                                                                                                                                                                                                                                                                                                                                                                                Local S.
112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                source
                                                                                                                                                                                                                                                                                                                                                                              mRNA
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NID
KEYWORDS
SOURCE
                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                          Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             W89306 604 bp mRNA EST 12-SEP-1996 mf81d10.rl Soares mouse embryo NbME13.5 14.5 Mus musculus CDNA clone 420691 5' similar to 9b:X52875 Mouse homeobox gene S8 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
MGI:255243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                         110 aagcagcgcggaatcgaaccacattcaacagcagccagctgcaggcgctggagcgtgta 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      372 AAACAGGGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGCAGTC 431
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
WashIngton University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, NO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                    /clone="464692"
/clone_lib="Soares mouse embryo NbME13.5 14.5"
/sex="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                            ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 55; DB 3; Length 572;
Pred. No. 1.92e-25;
0; Mismatches 57; Indels
                                                                                                                                                                                                                                                            /tissue_type="embryo"
/dev_stage="13.5-14.5dpc total fetus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                               97 t
 /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The WashU-HHMI Mouse EST Project Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                 164 g
                                                                                                                                                                                                                                                                                                                                                                             Query Match 2.3%;
Best Local Similarity 66.3%;
Matches 112; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 604)
                                                                                                                                                                                                                                                                                                                               189 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MOUSE);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            91542173
                                                                                                                                                                                                                                                                                                     mRNA
"JASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JURCE
ÓRGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YWORDS
```

გ ð 유 ò 윱 õ

```
T 31, on equal amounts of mRNA from 2 13.5dpc and 2
14.5dpc embryos [total RNA provided by Minoru Ko, Wayne
State Univ., from 2 1; double-stranded cDNA was ligated to
Eco RI adaptors (Pharmacia), digested with Not I and
cloned into the Not I and Eco RI sites of the modified
pT773 vector. Library went through one round of
normalization, and was constructed by Bento Sores and
Dases 1 to 424)
Marra,M., Hillter,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Gelsel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schallenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W17990 424 bp mRNA EST 10-SEP-1996 mb82e05.rl Soares mouse p3NMF19.5 Mus musculus cDNA clone 335936 5' similar to gb:U03873 Mus musculus homeobox (MOUSE);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           113 aagcagcgggaatcgaaccacattcaacagcagccagctgcaggcgctggagcgtgta 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     372 AAACAGCGCAGAAATCGGACAACCTTCGCTCTTCAGCAGTTGGAAGCTCTGGAGGCAGTC 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      432 TTTGCCCAAACACACTACCCAGATGTCTTCACCAGAGAAGAGCTAGCCATGAAATAAAC 491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63108
                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="Soares mouse embryo NbME13.5 14.5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WashU-HHMI Mouse EST Project
Washington University School of MedicineP
W444 Forest Park Parkway, Box 8501, St. Louis, MO
Tel: 314 286 1810
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 55; DB 182; Length 60
Pred. No. 1.92e-25;
0; Mismatches 57; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="embryo"
/dev_stage="13.5-14.5dpc total fetus"
```

US-08-701-278-1.rst

```
NCBI g1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human.
                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                           W17990 424 bp* mRNA EST 29-APR-1996 mD82e05.rl Soares mouse p3NMF19.5 Mus musculus cDNA clone 335936 5' w1111ar to gb:U03873 Mus musculus homeobox (MOUSE);.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 424)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Gelsel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,R., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This clone is available royalty-free through LLNL; contact the IMMGE Consortium (info@image.llnl.gov) for further information. MGI:217336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                431 CTTTGCCCAAACACACTACCCAGATGTCTTCACCAGAGAAGAGCTAGCCATGAAAATAAA 490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ctttgagcggacacattacccggatgctttgttcgagaagatctcgcacgtcgggtgaa 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Washu-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 54; DB 185; Length 424;
Pred. No. 1.71e-24;
0; Mismatches 28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                  86 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: mouseest@watson.wustl.edu
                                                 Seq primer: mob.REGA+ET
High quality sequence stop: 384.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 384.
                                                                                                                                                                                                                                                                                                                                                                                                100 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seq primer: mob.REGA+ET
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 2.2%;
Best Local Similarity 74.5%;
Matches 82; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                  118 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Waterston, R.
                                MGI:217336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91292374
                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                               mrna
Base count
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
```

ò 윱 ò

```
AA022577 513 bp mRNA EST 09-AUG-1996 ze72e10.s1 Soares fetal heart NDHH19W Homo sapiens cDNA clone 364554 3' similar to SW:HPRI_CHICK Q05437 HOMEOBOX PROTEIN PRX-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This clone is available royalty-free through LLNL; contact the IMAGE Consortlum (info@image.llnl.gov) for further information. Possible reversed clone: similarity on wrong strand possible reversed clone: polyT not found Seq primer: -40M13 fwd. from Amersham High quality sequence stop: 448.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ctttgagcggacacattacccggatgctttgttcgagaagatctcgcacgtcgggtgaa 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases I to 513)
Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M. Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Materston,R., Williamson,A., Wohldmann,P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Wilson RK
WashU-Merck EST Project
WashIngton University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 cctcactgaggccagagtgcaggtgtggtttcagaaccgaagagccaagt 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches 28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 54; DB 217;
Pred. No. 1.71e-24;
                                             /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wilson, R.
The WashU-Merck EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 2.2%;
Best Local Similarity 74.5%;
Matches 82; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1..513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA022577
g1486694
```

```
Sus scrofa
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Artiodactyla; Suiformes; Suina; Suidae; Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 372)
Winteroe, A.K., Fredholm, M. and Davies, W.
Evaluation and characterization of a porcine small intestine CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
Submitted (26-JUL-1995) Winteroe A.K., The Royal Veterinary and
Agricultural University, Department of Animal Science and Animal
Health, Division of Animal Genetics, Bulowsvej 13, 1870
Frederiksberg C, DENMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="small intestine"
/clone_lib="directionally cloned cDNA in XL1-blue MRF'"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  456 GTCTTCACCAGAGAGAGCAGCCATGAAAATAAACCTCACAGAAGCAGAGTGCAGGTT 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         230 atgtccactcgcgaagaaatcgccgtgtggaccaaccttacggaagcccgagtccgggtt 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S.scrofa mRNA; expressed sequence tag (5'; clone clell). F14521
                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="Soares mouse embryo NbME13.5 14.5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 439;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches 51; Indels
                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="embryo"
/dev_stage="13.5-14.5dpc total fetus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 2.1%; Score 51; DB 172; Best Local Similarity 66.7%; Pred. No. 1.12e-21; Matches 102; Conservative 0; Mismatches 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  516 TGGTTCCAGAACCGAAGAGCCAAGTGGAGGAAG 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             290 tggttcaagaatcgccgggccaaatggagaagg 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              64
MGI:233133
Seq primer: ETPrimer
High quality sequence stop: 347.
Location/Qualifiers
                                                                                                   /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism-"Sus scrofa"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mamm. Genome 7, 509-517 (1996)
2 (bases 1 to 372)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            132 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST; expressed sequence tag
                                                                                                                   /strain="C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                        /sex="unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                            <1..>439
124 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Winteroe, A.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9971739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     library
                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
         I (bases I to 439)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Thelsing,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W59350 439 bp mRNA EST 06-JUN-1996 md49b07.rl Scares mouse embryo NbMEl3.5 14.5 Mus musculus CDNA clone 371701 5' similar to PIR:S52424 S52424 homeodomain protein unc-30 - Caenorhabditis elegans ;.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  286 tgtctttgagoggacacactatcctgatgctttgtgcgagaagaccttgcccgccgggt 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                          428 AGTCTTTGCCCAAACACACTACCCAGATGTCTTCACCAGAGAAGAGCTAGCCATGAAAAT 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Washur-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                      Length 513;
                                                                                                                                                                                                                                                                                                                                    5 others
                                                                                                                                                                                                                                                                                                                                                                                    Score 53; DB 26; Length 513
Pred. No. 1.51e-23;
0; Mismatches 54; Indels
                                                                                                                                                                                                                                                                             /dev_stage="19 weeks"
/lab_host="hH10B (ampicillin resistant)"
complement(<1..>513)
1 2 c 151 g 85 t 5 other
                                                                                                                                                                                                                      /clone="364554"
/clone_lib="Soares fetal heart NDHH19W"
/sex="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The WashU-HHMI Mouse EST Project
Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                    Query Match 2.2%;
Best Local Similarity 69.7%;
Matches 136; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         406 gcagaatggagagag 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         544 GGAAGACAGAGAG 558
                                                                                                                                                                                                           NbHL19W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91366052
                                                                                                                                                                                                                                                                                                                                    133
                                                                                                                                                                                                                                                                                                     mRNA
BASE COUNT
RIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YWORDS
```

RESULT

à 윱 ö g ö 셤 ö

ö

ö

A LANGUAGE CONCREMENTS

ω

```
house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MGI:246893
                                                                                                                                                                                                                                                                                                                                                                  (MOUSE);
                                                                                                                                                                                                                                                                                                                                                                                          W81935
g1392750
                                                                                                                                                                                                                                                 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MRNA
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                           셤
                                          ð
                                                                                                                                                        å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="orf"
/note="expressed sequence tag"
/note="homolog to alx3 gene product; Mesocricetus auratus"
Sequence 372 BP; 94 A; 112 C; 114 G; 43 T; 9 other;
                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Sus scrofa"
/tissue_type="small intestine"
/clone_lib="directionally cloned cDNA in XL1-blue MRF'"
/clone="cle11"
/l..>372
/l..>372
                                                                                                                                                                                                                                                                                                                                                        200 agoggaggatcogaaccaccttcaccacagagcagctgcaggagctggagaagatcttcc 259
                                                                                                                                                                                                                                                                                                                                                                                       260 atttcacccactaccccgatgtccatatccgcaaccagctngnagccaggntcaacctnc 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        200 agoggaggatocgaaccaccttcaccacagagcagctgcaggaggtcttcc 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      260 atttcacccactaccccgatgtccatatccgcaaccagctngnagccaggntcaacctnc 319
                                                                                                                                                                                                                                                                                                     0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 49; DB 249; Length 372;
Pred. No. 7.98e-20;
0; Mismatches 65; Indels 0; Gaps
                                                                                     //octe-"expressed sequence tag; homolog to alx3 gene product; Mesocricetus auratus" 9 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (26-JUL-1995) to the EMBL/GenBank/DDBJ databases.
Winteroe A.K., The Royal Veterinary and Agricultural University,
Department of Animal Science and Animal Health, Division of Animal
Genetics, Bulowsvej 13, 1870 Frederiksberg C, DENMARK
Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Winteroe A.K., Fredholm M., Davies W.;
"Evaluation and characterization of a porcine small intestine cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          320 cagaagctcgggtacagatctggttccagantcagcgagccaagcgncggaag 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCIEII standard; RNA; EST; 372 BP.

SCIEII standard; RNA; EST; 372 BP.

971739
30-40G-1995 (Rel. 45, Created)
30-50G-1996 (Rel. 49, Last updated, Version 3)
S.SCIOÍA MRNA; expressed sequence tag (5'; clone clell)
EST; expressed sequence tag.
Sus scrofa (domestic pig)
EUR SCOOÍA (domestic pig)
EUR SCOOÍA (Allalia; Metazoa; Chordata; Vertebrata; Mammalia; Theria; Eutheria; Artiodactyla; Suiformes; Suidae.
                                                                                                                                                                                                                                       DB 128; Length 372;
                                                                                                                                                                                                                                 Query Match 2.0%; Score 49; DB 128; Length 37: Best Local Similarity 62.4%; Pred. No. 7.98e-20; Matches 108; Conservative 0; Mismatches 65; Indels
/clone="cle11"
<1..>372
/gene="orf"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mamm. Genome 7:509-517(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 62.4%;
Matches 108; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.0%;
                                                                                                                                                  94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Winteroe A.K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        llbrary";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Duery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                  BASE COUNT
ORIGIN
                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                     ζ
                                                                                                                                                                                                                                                                                                                                                           욢
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ID AAC OOC OOK WILL REPRESENT THE REPRESENT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Parit Line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
```

```
1 (bases 1 to 309)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ä
                                                                                                                      W81935 309 bp mRNA EST 12-SEP-1996 me93dll.rl Soares mouse embryo NbMEl3.5 14.5 Mus musculus CDNA clone 403125 5' similar to 9b:X52875 Mouse homeobox gene S8 mRNA
                                                                                                                                                                                                                                                                                                                  Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutherla; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: mouseestewatson.wustl.edu
This clone is available royalty free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
320 cagaagctcgggtacagatctggttccagantcagcgagccaagcgncggaag 372
                                         548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="Soares mouse embryo NbME13.5 14.5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 309;
                      Score 45; DB 180; Length 30 Pred. No. 3.39e-16; 0; Mismatches 59; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="embryo"
/dev_stage="13.5-14.5dpc total fetus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Trace considered overall poor quality
Seg primer: -28M13 rev2 from Amersham
High quality sequence stop: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Waterston, R.
The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="403125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /sex="unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 1.9%;
Best Local Similarity 64.7%;
Matches 110; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84
                                                                                                                                                                                                                                                                                                Mus musculus
```

```
음
```

셤

Search completed: Fri May 30 16:40:55 1997 Job time: 2071 secs.

:

****	(TM)	*****
在你的情况的 医克勒氏性 医克勒氏征 医克克氏征 医克克氏征 医克克氏征 医克克氏征 医克克氏征 医克克氏征 医克克氏征 医克克氏征 医克克氏征 医克氏征 医	·	<b>化电影电影电影电影电影电影电影电影电影电影电影电影电影电影电影电影电影电影电影</b>
**********		*********
*********		**********
*********	_==_	**********
********	     >>>	*********
******		********

Release 2.1D John F. Collins, Biocomputing Research Unit. Copyright (c) 1993, 1994, 1995 University of Edinburgh, U.K. Distribution rights by IntelliGenetics, Inc.

protein - protein database search, using Smith-Waterman algorithm MPsrch\_pp

Thu May 29 11:34:49 1997; MasPar time 13.15 Seconds 570.251 Million cell updates/sec Run on:

abular output not generated.

Description: Perfect Score: Title:

.>US-08-701-278-2 (1-263) from USO8701278.pep 1857 1 MFYFHCPPQLEGTAPFGNHS......EGSQDKPSPTKEQSEGEKSV 263 Sequence:

PAM 150 Gap 11 Scoring table:

89912 seqs, 28507787 residues Searched:

Minimum Match 0% Listing first 45 summaries Post-processing:

Database:

l:annl 2:ann2 3:ann3 4:ann4 5:unann1 6:unann2 7:unann3 8:unann4 9:unann5 10:unann6 11:unann7 12:unann8 13:unann9 14:unann10 15:unenc 16:unrev

Mean 44.651; Variance 107.204; scale 0.417 Statistics:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

No.	44	43	40	40	40	40	40	40	39	39	39	39	39	39	39	38	38	38	38	38	37
Pred.	4.05e-44	5.48e-43	3.00e-40	4.35e-4	4.35e-4	4.35e-4	6.29e-4	6.29e-4	1.32e-39	2.76e-3	1.91e - 3	2.76e-3	8.34e-39	8.34e-39	8.34e-39	1.74e-3	1.74e-3	1.74e-3	2.52e-3	7.61e-3	6.90e-3
Description	transcription factor	Phox2 homeodomain pr	paired-related homeo	MHox - mouse	homeobox protein - m	DNA-binding protein	homeodomain protein	homeotic protein smo	gene alx3 protein -	transcription factor	transcription factor	pax-3 protein - mous	homeotic protein S8	gene S8 protein - mo	Prx-2 protein - chic	mab-18 protein (tran	mab-18 protein (tran	vab-3 protein - Caen	cartilage homeoprote	Pax7 - mouse (fragme	gene Pax-6 protein -
O	A46403	I48713	I50413	153118	148902	S26076	I51226	S27842	148185	A45452	S50115	S15031	S18038	I48410	S49440	860250	S60251	S60252	A47523	149265	I51234
Length DB	384 16	280 14	244 13	217 14	217 14	245 14	245 16	288 12	346 14	326 13	467 13	479 14	164 14	164 14	165 13	284 12	296 12	455 12	326 14	290 14	216 16
% Query Match	21.5	21.1	20.2	20.1	20.1	20.1	20.1	20.1	20.0	19.9	19.9	19.9	19.7	19.7	19.7	19.6	19.6	19.6	.19.5	19.4	19.1
Score	399	392	375	374	374	374	373	373	371	369	370	369	366	366	366	364	364	364	363	360	354
.esult No.	П	7	m ,	4	S	9	. 7	æ	თ	. 10	11	13	13	14	15	16	17	. 18	.19	. 20	21

.... Dil did did und des des decimales and

148713 #type complete
Phox2 homeodomain protein - mouse
#formal\_name Mus musculus #common\_name house mouse
02-Jul-1996 #sequence\_revision 02-Jul-1996 #text\_change
02-Jul-1996
148713
148314
Valarche, I.; Tissier-Seta, J.P.; Hirsch, M.R.; Martinez, S.;

ACCESSIONS REFERENCE #authors

ORGANISM DATE

~

RESULT ENTRY TITLE

5;

Length 217;

#note

GENETICS SUMMARY

```
#journal Development (1992) 115:1087-1101
#title MHox:a mesodermally restricted homeodomain protein that binds an essential site in the muscle creatine kinase enhancer.
#cross-references WUID:93083424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nucleic Acids Res. (1992) 20:5189-5195
A novel murine homeobox gene isolated by a tissue specific
                                                                                                                                                                                                                                                                                                                                             91 krkgrrnrttfnssqlqalervferthypdafvredlarrvnltearvgvwfgnrrakfr 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91 krkgrrnrttfnssglgalervferthypdafvredlarrvnltearvgvwfgnrrakfr 150
                                                                                                                                                                                                                                                                                                                                                                     #formal_name Mus musculus #common_name house mouse 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 02-Jul-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SZ6076 *type complete
DNA-binding protein - mouse
#formal_name Mus musculus #common_name house mouse
25-Feb-1994 #sequence_revision 01-Sep-1995 #text_change
SZ6076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genomic organization and chromosome localization of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kern, M.J.; Witte, D.P.; Valerius, M.T.; Aronow, B.J.;
Potter, S.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kern, M.J.; Argao, E.A.; Birkenmeler, E.H.; Rowe,
Potter, S.S.
Genomics (1994) 19:334-340 --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##cross-references EMBL:U03873; NID:g460124; CDS_PID:g460125
                                                                                                                                                                     *#status preliminary; translated from GB/EMBL/DDBJ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      preliminary; translated from GB/EMBiz/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 374; DB 14; Length 21
Pred. No. 4.35e-40;
18; Mismatches 23; Indels
                                                                                                                                                                                                                                                          Query Match 20.1%; Score 374; DB 14; Length 21 Best Local Similarity 54.7%; Pred. No. 4.35e-40; Matches 52; Conservative 18; Mismatches 23; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene name Pmx
#length 217 #molecular-weight 24369
                                                                                                                                                                                                                                                                                                                                                                                                                                                       : ||: :: ::: | ::||:
90 KTERGA-SDQEPGA-KEPMAEVTPPPVRNINSPPP 122
                                                                                                                                                                                                                                                                                                                                                                                                                               151 rneramlanknasllksysgdvtavegpivprpap 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         151 rneramlanknasliksysgdvtaveqpivprpap 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     murine homeobox gene Pmx.
#cross-references MUID:94245205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           148902 #type complete
homeobox protein - mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1-217 ##label RES
             D.A.; Olson, E.N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 20.1%;
Best Local Similarity 54.7%;
Matches 52; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   148902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 I48902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S26076
                                                                                                                                                                           ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##residues
                                                                                                                 #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENETICS
                                                                                                                                                                                                                     SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DATE
                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H
                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ï
                                         The mouse homeodomain protein Phox2 regulates Noam promoter activity in concert with Cux/CDP and is a putative determinant of neurotransmitter phenotype.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #authors Nohno, T.; Koyama, E.; Myokai, F.; Taniguchi, S.; Ohuchi,
Salto, T.; Noji, S.
#journal Dev. Biol. (1999) 158:254-264
#title The chicken homeobox gene related to Drosophila paired is
predominantly expressed in the developing limb.
#cross_references WUID:93321789
                                                                                                                                                                                                                                                                                                                                                                                               91 krkgrrnrttfnssglgalervferthypdafvredlarrvnltearvgvwfgnrrakfr 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cserjesi, P.; Lilly, B.; Bryson, L.J.; Wang, Y.; Sassoon
                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 paired-related homeotic gene product - chicken #formal_name chicken 13 Sep-1996 #sequence_revision 13-Sep-1996 #text_change 13-Sep-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #formal_name Mus musculus #common_name house mouse
02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change
03-Aug-1996
                                                                                                                                                                                                                                                        gene name Phox2
#length 280 #molecular-weight 29417 #checksum 3267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene name Prx-1
#length 244 #molecular-weight 27130 #checksum 5105
                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                            ##cross-references EMBL:X75014; NID:9402641; CDS_PID:9402642
                                                                                                                                                                                                                                                                                                                Score 392; DB 14; Length 280;
Pred. No. 5.48e-43;
11; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 244;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ##residues 1-244 ##label NOH
##cross-references GB:D13433; NID:9222850; CDS_PID:9222851
                                                                                                                              **status preliminary; translated from GB/EMBL/DDBJ##pmolecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ##molecule_type mRNA
##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 20.2%; Score 375; DB 13; Length 24 Best Local Similarity 55.3%; Pred. No. 3.00e-40; Matches 52; Conservative 16; Mismatches 25; Indels
Goridis, C.; Brunet, J.F.
Development (1993) 119:881-896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             151 rnermlasknasllksysgdvtaveqpivprpap 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90 KTERGASDQEPGA-KEPMAEVTPPPVRNINSPPP 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #type complete
                                                                                                                                                                                      1-280 ##label RES
                                                                                                        *cross-references MUID:94244481
                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 69.9%;
Matches 51; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MHox - mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147 kqeraasakgaag 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90 KTERGASDQEPGA 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                I50413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           I53118
                                                                                                                                                                                      ##residues
                                                                                                                            *accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *accession
                       #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSIONS
```

TITLE ORGANISM

DATE

RESULT

용

#note

REFERENCE

į

TITLE ORGANISM

DATE

RESULT

ö 셤 à

ä

Gaps

5,

410

#checksum

ë,

m

\*accession

95-151

SUMMARY

```
gene alx3 protein · golden hamster
#formal_name Mesocricetus auratus #common_name golden hamster
02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change
02-Jul-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #authors Hoth, C.F.; Milunsky, A.; Lipsky, N.; Sheffer, R.; Clarren, S.K.; Baldwin, C.T.
#journal Am. J. Hum. Genet. (1993) 52:455-462
#title Mutations in the paired domain of the human PAX3 gene cause Klein-Waardenburg syndrome (WS-III) as well as Waardenburg syndrome type I (WS-I)
#cross-references MUID:93190976
#accession A45452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rudnick, A.; Ling, T.Y.; Odagiri, H.; Rufter, W.J.; German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  153 kskkrrnrttístígleelekvígkthypdvyareglalrtdltearvqvwígnrrakwr 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 krkqrrirttftslqlkelerafqethypdiytredlalridltearvqvwfqnrrakfr 60
                                                                                                                                                                                                                                                   30 RKKORNRTTFALQQLEALEAVFAQTHYPDVFTREELAMKINLTEARVQVWFQNRAKWR 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             transcription factor PAX3 – human (fragments)
#formal_name Homo sapiens #common_name man
21-Sep-1993 #sequence_revision 10-May-1996 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Proc. Natl. Acad. Sci. U.S.A. (1994) 91:12203-12207
Pancreatic beta cells express a diverse set of homeobox
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #checksum 9400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##cross-references EMBL:X81403; NID:g587455; CDS_PID:g587456
                                                                                                                                             Length 288;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 346;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                        Indels
                                                                                 #domain homeobox homology #label HOX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene name alx3
#length 346 #molecular-weight 37203
                                                                                                                                                                                        17; Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 371; DB 14;
Pred. No. 1.32e-39;
8; Mismatches 10
                                                                                                                                           Query Match 20.1%; Score 373; DB 12; Best Local Similarity 54.8%; Pred. No. 6.29e-40; Matches 51; Conservative 17; Mismatches 22
                       ##cross-references EMBL:M85303
FICATION #superfamily homeobox homology
                                                                                                                                                                                                                                                                                                                                      61 kter-viqpdtttt-psssi-pinmnniehnps 90
                                                                                                     #length 288 #checksum 2739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #type fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                         #type complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ##molecule_type mRNA
##residues 1-346 ##label RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A45452; A56744; B45452
    1-288 ##label WEB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *cross-references MUID:95083670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match 20.0%;
Local Similarity 71.9%;
les 46; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-Sep-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qenes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          148185
148185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           M.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                         148185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    213 krer 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90 KTER 93
##residues
                                           CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #journal
#title
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSIONS
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARY
                                                                                                     SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #authors
#submission submitted to the EMBL Data Library, February 1992
#description, Conserved classes of homeodomains in Schistosoma mansoni, an
early bilateral metazoan.
#accessjon S27842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kuratani, S.; Martin, J.F.; Wawersik, S.; Lilly, B.; Eichele,
G.; Olson, E.N.
Dev. Biol. (1994) 161:357-369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #fitle The expression pattern of the chick homeobox gene gMHox suggests a role in patterning of the limbs and face and in compartmentalization of somites.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                             91 krkgrrnrttfnssglgalervferthypdafvredlarrvnltearvgvwfgnrrakfr 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30 RRKQRRNRTTFALQQLEALEAVFAQTHYPDVFTREELAMKINLTEARVQVWFQNRRAKWR 89
                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               homeodomain protein - chicken
#formal_name Gallus sp. #common_name chicken
13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change
13-Sep-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #formal_name_Schistosoma mansoni
17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change
30-Sep-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                        #checksum 6352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                           Score 374; DB 14; Length 245;
Pred. No. 4.35e-40;
18; Mismatches 23; Indels ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 373; DB 16; Length 245 Pred. No. 6.29e-40; 8; Mismatches 10; Indels
                                                                                                                                                                 #domain homeobox homology #label HOX #length 245 #molecular-weight 27269 #ch
                                                                                                                                                                                                                                                                                                                                                                                                                        : ||: :::: |:|
KTERGA-SDQEPGA-KEPMAEVTPPPVRNINSPPP 122
                                                                                                                                                                                                                                                                                                                                                                                                 151 rneramlanknasllksysgdvtavegpivprpap 185
                                                                    ##residues 1-245 ##label KER ##cross-references EMBL:X59725 % CLASSIFICATION #superfamily homeobox homology FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #type complete
    PCR cloning strategy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mansoni) (fragment)
                           ##molecule_type mRNA
                                                                                                                                                                                                                             Query Match 20.1%;
Best Local Similarity 54.7%;
Matches 52; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 20.1%;
Best Local Similarity 72.3%;
Matches 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #accession S27842
##molecule_type mRNA
                       826076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 151226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          151 rnera 155
```

\*accession

SUMMARY

#authors #journal

ACCESSIONS

REFERENCE

TITLE ORGANISM DATE

RESULT ENTRY

8

ę

KTERG 94

90

· Å

ò 윱 RESULT ENTRY TITLE REFERENCE #authors

ACCESSIONS

ORGANISM

ö

ö

dia kanaratan di kabilah

```
S15031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         275 rk-qagang 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      89 RKTERGASD 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       72 rnera 76
                                                                                                                                                                                                                                                                      ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #description
                                                                                                                                                                                                                                                                                    CLASSIFICATION
FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #submission
                                                                                                                                                                                                                          #accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
    12
                                                                                                                                 #authors
                                                                                                                                                              #journal
                                                                                                                                                                                                                                                                                                                                  220-276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSIONS
REFERENCE
                                                                                               ACCESSIONS
                                                                                                                                                                             #title
                                                                                                                                                                                                                                                                                                                   34-159
                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                   ORGANISM
DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-72
                                                                                                                                                                                                                                                                                                                                                  SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARY
        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Busslinger, M.
Nucleic Acids Res. (1994) 22:4574-4582
Molecular cloning and characterization of a human PAX-7 cDNA expressed in normal and neoplastic myocytes.
                                                sequence modified after extraction from NCBI backbone
                                                          A56744
Macina, R.A.; Barr, F.G.; Galili, N.; Riethman, H.C.
Genomics (1995) 26:1-8
Genomic organization of the human PAX3 gene: DNA sequence
analysis of the region disrupted in alveolar
rhabdomyosarcoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62 lkrkgrrsrttftaegleeleraferthypdiytreelagrakitearvqvwfsnrrarw 121
                                                                                                                                                                                                                                                                                                                                                                                                                                         S50115 #type fragment
transcription factor pax-7 - human (fragment)
#formal_name Homo sapiens #common_name man
14-Jul-1995 #sequence_revision 10-Nov-1995 #text_change
19-Jan-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S50115
Schaefer, B.W.; Czerny, T.; Bernasconl, M.; Genini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ##Fesidues 1-467 ##label SCH
##cross-references EMBL:235141
FICATION #superfamily paired box homology; homeobox homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 9; Indels 1;
##residues 1-28,29-306 ##label HOT
##cross-references NCBLN:126845; NCBIP:126846; NCBIN:126847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 370; DB 13; Length 467; Pred. No. 1.91e-39;
                                                                                                                                                                                                                                                                                                                                                                 Length 326;
                                                                                                                                                                                                                                                                                                                                                                                            9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #domain paired box homology #label PBH\
#domain homeobox homology #label HOX
#length 467 #checksum 4440
                                                                                                                                                                                                                                                                                                                #domain homeobox homology #label HOX
                                                                                                                                                                                                                                                                                                                                                               Score 369; DB 13;
Pred. No. 2.76e-39;
                                                                                                                                                                                                                                                                                                                                                                                            13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13; Mismatches
                                                                                                                                                                                                                                                               #map_position 2936-2936
CLASSIFICATION #superfamily homeobox homology
                                                                                                                                                                        ##molecule_type DNA
##residues 1-28;43-326 ##label MAC
##cross-references GB:U12263
                                                                                                                                                                                                                                                                                                                               #length 326 #checksum 8075
                                                                                                                                                                                                                                                    ##cross-references GDB:120495
                                                                                                                                                                                                                                                                                                                                                             / Match
Local Similarity 66.7%;
les 46; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
19.9%;
Best Local Similarity 66.7%;
Matches 46; Conservative
                                                                                                                                                                                                                                     GDB:PAX3; WS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ##molecule_type DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122 rk-qagang 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273 rk-qagang 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    89 RKTERGASD 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RKTERGASD 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ##status
                                                                                                                                                           *accession
                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *accession
                                                ##note
                                                                             #authors
#journal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              34-161
218-274
SGWMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        # journal
                                                                                                                                                                                                                                                                                                           67-123
JAMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSIONS
                                                                                                                                                                                                                                                                                                                                                                             Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83
                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #t1tle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
Opstelten, D.J.E.; Vogels, R.; Robert, B.; Kalkhoven, E.; Zwartkruis, F.; de Laaf, L.; Destree, O.H.; Deschamps, J.; Lawson, K.A.; Meijlink, F. submitted to the EMBL Data Library, May 1990
The mouse homeobox gene, S8, is expressed during embryogenesis predominantly in mesenchyme.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                              EMBO J. (1991) 10:1135-1147
Pax-3, a novel murine DNA binding protein expressed during
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
#domain paired box homology #label PBH\
#domain homeobox homology #label HOX
#length 479 #molecular-weight 52984 #checksum 6402
                                                                                                                                                                                                                                                                                                                #superfamily paired box homology; homeobox homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
19.9%; Score 369; DB 14; Length 479;
Best Local Similarity 66.7%; Pred. No. 2.76e-39;
Matches 46; Conservative 13; Mismatches 9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 366; DB 14; Length 16
Pred. No. 8.34e-39;
9; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #domain homeobox homology #label HOX #length 164 #checksum 4472
                                                                                                                              Goulding, M.D.; Chalepakis, G.; Deutsch, Gruss, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ##CIOSS-references EMBL:X52875
CLASSIFICATION #superfamily homeobox homology
KEYWORDS DNA binding; homeobox
                                                                                                                                                                                                                                                                                           1-479 ##label GOU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1-164 ##label OPS
                                                                                                                                                                                                     early neurogenesis.
                                                                                                                                                                                                                                                    ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           / Match 19.7%;
Local Similarity 70.8%;
nes 46; Conservative
                                                                       08-Dec-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ##molecule_type mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : ||:
KTERG 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
```

```
Brouwer, A.; Meijlink, F. submitted to the EMBL Data Library, June 1994
Expression of members of the Prx-family of homeobox genes (S8 and Mhox/K2/Pmx/Phox1) in mouse and chicken embryos.
                                                                                                                                           #authors Opstelten, D.J.; Vogels, R.; Robert, B.; Kalkhoven, E.; Zwarkruis, F.; de Laaf, L.; Destree, O.H.; Deschamps, J.; Lawson, K.A.; Meijlink, F.

#journal Mch. Dev. (1991) 34:29-41

#title The mouse homeobox gene, S8, is expressed during embryogenesis predominantly in mesenchyme.

#cross-references MUD:92001534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 kkkgrrnrttfnssqlqalervferthypdafvreelarrvnlsearvqvwfqnrrakfr 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54940 #type complete
Prx-2 protein - chicken
#formal_name Gallus gallus #common_name chicken
20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change
07-Jul-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                  148410 #type fragment
gene S8 protein - mouse (fragment)
#formal_name Mus musculus #common_name house mouse
02-011-1996 #sequence_revision 02-Jul-1996 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #domain homeobox homology #label HOX
#length 165 #molecular-weight 18691 #checksum 7828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                             ##residues 1-164 ##label RES ##cross-references EMBL:X52875; NID:951365; CDS_PID:951366
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
19.7%; Score 366; DB 14; Length 164;
Best Local Similarity 70.8%; Pred. No. 8.34e-39;
Matches 46; Conservative 9; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 19.7%; Score 366; DB 13; Length 165; Best Local Similarity 70.8%; Pred. No. 8.34e-39; Matches 46; Conservative 9; Mismatches 10; Indels
                                                                                                                                                                                                                                                               ##Status preliminary; translated from GB/EMBL/DDBJ#Fresidues 1-16/ ##...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##residues 1-165 ##label BRO ##cross-references EMBL:X79695 CLASSIFICATION #superfamily homeobox homology FEATURE
                                                                                                                                                                                                                                                                                                                                                                                    gene name S8
#length 164 #checksum 4472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ##molecule_type mRNA
##residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S49440
S49440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         849440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           72 rnera 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73 rnera 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KTERG 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90 KTERG 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #authors
#submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #accession
                                                                                                         ACCESSIONS
REFERENCE
#authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15
   14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSIONS
REFERENCE
RESULT
ENTRY
TITLE
ORGANISM
DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
ORGANISM
DATE
                                                                                                                                                                                                                                                                                                                                                                                      #note
SUMMARY
                                                                                                                                                                                                                                                                                                                                                                   SENETICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
ENTRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     윱
```

```
Search completed: Thu May 29 11:35:54 1997
Job time : 65 secs.
```

****	TM)	* * *
**********	·=====================================	****
********		*********
**********		**********
*********	'=' '-' 	*********
<b>非非种种的政治的 医克拉克氏 医克拉氏氏 医克拉氏氏征 医克拉氏氏征 医克拉氏氏征 医克拉氏氏征 医克拉氏氏征 医克拉氏氏征 医克拉氏氏征 医克拉氏氏征 医克拉氏氏征 医克拉氏征 医克拉氏试验验 医克拉氏征 医氏管检验检检验验检检验验检检验检检验验检检验验检验验检检验验检检验验检检验验检检</b>	 	*************************************
***	·	***

Release 2.1D John F. Collins, Biocomputing Research Unit. Copyright (c) 1993, 1994, 1995 University of Edinburgh, U.K. Distribution rights by IntelliGenetics, Inc.

protein - protein database search, using Smith-Waterman algorithm MPsrch\_pp

MasPar time 9.24 Seconds 603.427 Million cell updates/sec Thu May 29 11:33:55 1997; Run on:

abular output not generated.

>US-08-701-278-2 (1-263) from USO8701278.pep 1857 1 MFYFHCPPQLEGTAPFGNHS......BGSQDKPSPTKEQSEGEKSV 263 Title:

Description: Perfect Score: Sequence:

PAM 150 Gap 11 Scoring table:

59021 seqs, 21210388 residues Searched:

Minimum Match 0% Listing first 45 summaries Post-processing:

swiss-prot34
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 Database:

Mean 46.324; Variance 87.195; scale 0.531 Statistics:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

		•						
sult.	Score	Query Match	Length	80	ID	Description	Pred. No.	
1	375	20.2	244	2	HPR1 CHICK	HOMEOBOX PROTEIN PRX-	2.18e-51	
7	374	20.1	199	7	PMX1_HUMAN	PAIRED MESODERM HOMEO	3.49e-51	
m	374	20.1	217	^	PMX1_MOUSE	PAIRED MESODERM HOMEO	3.49e-51	
	370	19.9	467	7	PAX7_HUMAN	PAIRED BOX PROTEIN PA	2.27e-50	
2	369	19.9	479	7	PAX3_MOUSE	PAIRED BOX PROTEIN PA	3.62e-50	
	369	19.9	479	7	PAX3_HUMAN	PAIRED BOX PROTEIN PA	3.62e-50	
7	360	19.4	290	7	PAX7_MOUSE	PAIRED BOX PROTEIN PA	2.42e-48	
æ	357	19.2	419	.7	GSC_DROME	HOMEOBOX PROTEIN GOOS	9.79e-48	
σ	354	19.1	216	7	PAX6_CHICK	PAIRED BOX PROTEIN PA	3.95e-47	
10	354	19.1	416	7	PAX6_COTJA	PAIRED BOX PROTEIN PA	3.95e-47	
11	354	19.1	422	7	PAX6_MOUSE	PAIRED BOX PROTEIN PA	3.95e-47	
12	354	19.1	422	7	PAX6_HUMAN	PAIRED BOX PROTEIN PA	3.95e-47	
13	353	19.0	437	7	PAX6_BRARE	PAIRED BOX PROTEIN PA	6.29e-47	
14	353	19.0	613	ß	HMPR_DROME	SEGMENTATION PROTEIN	6.29e-47	
15	351	18.9	449	4	GSBP_DROME	GOOSEBERRY PROXIMAL P	1.59e-46	
16	346	18.6	252	10	UNC4_CAEEL	HOMEOBOX PROTEIN UNC-	1.62e-45	
17	342	18.4	245	4	GSC_CHICK	HOMEOBOX PROTEIN GOOS	1.03e-44	
18	339	18.3	289	7	OTX2_MOUSE	HOMEOBOX PROTEIN OTX2	4.13e-44	
19	338	18.2	256	4	GSC_MOUSE	HOMEOBOX PROTEIN GOOS	6.56e-44	
20	338	18.2	289		OTX2_HUMAN	HOMEOBOX PROTEIN OTX2	6.56e-44	
21	338	18.2	427	4	GSBD_DROME	GOOSEBERRY DISTAL PRO	6.56e-44	
22	337	18.1	240	4	GSC BRARE	HOMEOBOX PROTEIN GOOS	1.04e-43	

2.62e 2.62e 1.66ee-443 1.66ee-443 1.66ee-443 1.66ee-443 1.72ee-421 1.72ee-32 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26 1.74ee-26
GGOOS GGOOS GGOOS GGOOS GCEH- CCHOX CCHOX CCHOX CCHOX CCHOX CCHOX MOX- MOX- MOX- MOX- MOX- MOX- MOX- MO
PROTEIN
HOMEOBOX HOM
GSCB_XENLA GSCA_XENLA CAT_LHUAN HM10_CAEEL OTX1_MOUSE HM0C_DROME UN30_CAEEL HM13_CHICK HM11_MOUSE HM11_MOUSE HM11_MOUSE HM11_MOUSE HM11_DROMI MOX1_HUMAN MOX2_RM1A MOX2_RM1A MOX2_RM1A MOX2_RM1A MOX2_RM1A MOX2_RM1A MOX2_RM1A MOX2_RM1A MOX2_RM1A MOX2_RM1A MOX2_RM1A MOX2_RM1A MOX2_RM1A MOX1_MOUSE HMDL_BRAFEL HMDL_BRAFEL MOX1_MOUSE HMDL_BRAFEL HMDL_BRAFEL MOX1_MOUSE
4 4 <b>L ಬ L ಬ O ಬ ಬ ಬ ಬ ಬ ಬ ಬ ಬ ಬ ಬ ಬ ಬ ಬ ಬ ಬ</b> ಬ ಬ ಬ ಬ
0.000 88 8.4 4.8 8.8 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0
33 33 33 34 35 35 36 36 37 37 37 37 37 37 37 37 37 37 37 37 37
22222222222222222222222222222222222222

# ALIGNMENTS

							Ε,																			•		
æ				•			EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; AVES; NEOGNATHAE;						NOHNO T., KOYAMA E., MYOKAI F., TANIGUCHI S., OHUCHI H., SAITO T.,			-!- FUNCTION: MAY BE INVOLVED IN THE DIFFERENTIATION OF BONE, MUSCLE,	AND OTHER TISSUES OF MESODERMAL ORIGIN DURING LIMB DEVELOPMENT.		TISSUE SPECIFICITY: EXPRESSED PREDOMINANTLY IN THE MESODERMAL	CELLS OF THE LIMB BUD, VISCERAL ARCHES AND CRANIOFACIAL PROCESS,	AND AT LOWER LEVELS, IN CRANIAL MESENCHYME, UPPER AND LOWER	RA.	SIMILARITY: STRONG WITH OTHER "PAIRED-TYPE" HOMEOBOX PROTEINS.		•		HOMEOBOX; DNA-BINDING; DEVELOPMENTAL PROTEIN; NUCLEAR PROTEIN.	
¥.		( <u>a</u>	ATE				ΉE						ŝ			ERE	N		NAN	SS	CHY	TEB	YT-C	=			EIN	
244 AA.		PDAT	UPL				ATA;						UCHI			DIF	RIGI		<u>8</u>	RCHE	ESE	VEF	IREL				PRO1	
		D	ION				EBR						NIG			HE	9		PRE	H A	님	S OF	PA				PAL	X
PRT;		DENC	OTAT				VERT						Į,			L	ERM	EAR.	SED	CER	ANIZ	LAGE	HER				MEN	HOMEOROX
STANDARD;	(REL. 29, CREATED)	01-JUN-1994 (REL. 29, LAST SEQUENCE UPDATE)	01-OCT-1994 (REL. 30, LAST ANNOTATION UPDATE)	HOMEOBOX PROTEIN PRX-1.		GALLUS GALLUS (CHICKEN).	ETAZOA; CHORDATA;			M N.A.	BUD;	21789.	YAMA E., MYOKAI F.		BIOL. 158:254-264(1993).	: MAY BE INVOLVED	R TISSUES OF MESOD	SUBCELLULAR LOCATION: NUCLEAR.	PECIFICITY: EXPRES	THE LIMB BUD, VIS	OWER LEVELS, IN CR	EYELIDS, SOMITES AND CARTILAGE OF VERTEBRA.	TY: STRONG WITH OT	EMBL; D13433; G222851;	; lenh.	PROSITE; PS00027; HOMEOBOX:	A-BINDING; DEVELOP	25.
X	994	994	994	PRO		ALLU	A; M	ÆS.		FRO	IMB	933	δ,		r I	TION	THE	ELLU	UE S	SOF	AT L	IDS,	LARI	3433	2836	PS0	NO .	
LT 1 HPR1_CHICK	01-JUN-19	01-JUN-19	01-0CT-15	HOMEOBOX	PRX-1.	GALLUS GA	<b>EUKARYOT</b>	GALLIFORMES.	[1]	SEQUENCE FROM N.A.	TISSUE-LIMB BUD;	MEDLINE; 93321789.	NOHNO T.,	NOJI S.;	DEV. BIOI	-1- FUNC	AND (		-i- TISS	CELLS	AND A	EYEL	-!- SIMII	EMBL; D1:	HSSP; PO;	PROSITE;	HOMEOBOX	DNA BIND
RESULT ID HE	금	DI	占	DE	CN	SO	8	႘	RN	КP	RC C	RX	RA	RA	RL	႘	႘	ខ	႘	႘	ပ္ပ	ខ	ပ္ပ	DR	DR	DR	X E	E

94 153 HOMEOBOX. 244 AA; 27130 MW; 6BD4C3A2 CRC32; DNA\_BIND SEQUENCE F S

Gaps 1; Query Match 20.2%; Score 375; DB 5; Length 244; Best Local Similarity 55.3%; Pred. No. 2.18e-51; Matches 52; Conservative 16; Mismatches 25; Indels g 윱 à

151 rnermlasknasllksysgdvtaveqpivprpap 184 : || : ::: | ::||: 90 KTERGASDQEPGA-KEPMAEVTPPPVRNINSPPP 122 ŏ ~

```
PROSITE; PS00027; HOMEOBOX, PROSITE; PS00034; PAIRED_BOX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                         153
197
                                                                                                                                                                                                                                                           217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SAPIENS (HUMAN)
                                                                                                                                                                                                                                                                                   217 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE, 95075634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE; 89305521.
                                                                                                                                                                                                                                                           200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MYOGENESIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAX7_HUMAN
P23759;
                                                                                                                                                                                                                                                           VARSPLIC
                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                      MOD_RES
                                                                                                                                                                                                                                                                                                                        Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HOMOH
       දු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                            ñ
                                                                                                                                                                                                      FUNCTION: ACTS AS A TRANSCRIPTIONAL REGULATOR OF MUSCLE CREATINE KINASE (MCK) AND SO HAS A ROLE IN THE ESTABLISHMENT OF DIVERSE MESODERWAL MUSCLE TYPES. THE PROTEIN BINDS TO AN A/T-RICH ELEMENT IN THE MUSCLE CREATINE ENHANCER (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                               73 krkgrrnrttfnssglgalervferthypdafvredlarrvnltearvgvwfgnrrakfr 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JT 3
PMX1 MOUSE STANDARD: PRT; 217 AA.
P43271: Q02810;
01-FEB-1995 (REL. 31, CREATED)
01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)
01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
PAIRED MESODERM HOMEOBOX PROTEIN 1 (HOMEOBOX PROTEIN MHOX) (HOMEOBOX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KERN M.J., WITTE D.P., VALERIUS M.T., ARONOW B.J., POTTER S.S.;
NUCLEIC ACIDS RES. 20:5189-5195(1992).
-1- FUNCTION: ACTS AS A TRANSCRIPTIONAL REGULATOR OF MUSCLE CREATINE
KINASE (MCK) AND SO HAS A ROLE IN THE ESTABLISHMENT OF DIVERSE
                                                                                                                                                                                                                                                                                                                                                                                                                              30 RKKQRRNRTIFALQQLEALEAVFAQTHYPDVFTREELAMKINLTEARVQVWFQNRRAKWR 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B., BRYSON L., WANG Y., SASSOON D.A., OLSON E.N.;
                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                  - SIMILARITY: STRONG WITH OTHER "PAIRED-TYPE" HOMEOBOX PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE; 94245205.
KERN M.J., ARGAO E.A., BIRKENMEIER E.H., ROWE L.B., POTTER S.S.;
GENOMICS 19:334-340(1994).
                                                                                                          HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                              EMBL; M95929; G189947; -.
MIM; 167420; -.
HOMEOBOX; DNA-BINDING; DEVELOPMENTAL PROTEIN; NUCLEAR PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MUS MUSCULUS (MOUSE).
EURARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
17 2
PS4821, HUMAN STANDARD; PRT; 199 AA.
P54821, 199 (REL. 34, CREATED)
01-0CT-1996 (REL. 34, LAST SEQUENCE UPDATE)
01-0CT-1996 (REL. 34, LAST ANNOTATION UPDATE)
PAIRED MESODERM HOMEOBOX PROTEIN I (HOMEOBOX PROTEIN PHOX1)
                                                                                                                                                                                                                                                                                                                                                                 Score 374; DB 7; Length 199;
Pred. No. 3.49e-51;
                                                                                                                                                                                                                                                                                                                                                                                           18; Mismatches 23; Indels
                                                                                                                                                                                 GRUENEBERG D.A., NATESAN S.* ALEXANDRE C., GILMAN M.Z.;
SCIENCE 257:1089-1095(1992).
                                                                                                                                                                                                                                                                                                                                HOMEOBOX.
4E3ADE7F CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133 rneramlanknasllksysgdvtaveqpivprpap 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CSERJESI P., LILLY B., BRYSON L. DEVELOPMENT 115:1087-1101(1992).
                                                                                                                                                                                                                                                                                                                     1 1
76 135 HC
199 AA; 22455 MW;
                                                                                                                                                                                                                                                                                                                                                                  Match 20.1%;
Local Similarity 54.7%;
les 52; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EUTHBRIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FROM N.A.
93083424.
                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE; 93027261.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROTEIN K-2).
PMX1 OR PMX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE; 93
CSERJESI P.
                                                                                                                                                                                                                                                                                                                                DNA_BIND
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                        MEDLINE
                                                                                                                                                                                                                                                                                                                   NON_TER
                                                                                                                                                                                                                                                                                                                                                                             Best Loc
Matches
RESULT
OF THE SOLT
OF THE SOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SHREFFS
                                                                                                                                                                                                                                                                                                                                                                                                                윱
                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

```
5;
                 IN THE MUSCLE CREATINE ENHANCER.
SUBCELLULAR LOCATION: NUCLEAR.
TISSUE SPECIFICITY: EXPRESSED EXCLUSIVELY IN MESODERMALLY DERIVED
CELL TYPES. DURING EMBRYOGENESIS, HIGHEST LEVELS OF EXPRESSION
ARE FOUND IN THE MESENCHYME AND PRECARTILAGE ELEMENTS OF THE FACE
AND HIND LIMBS. IN THE ADULT, EXPRESSION IS RESTRICTED TO SKELETAL
MUSCLE, HEART AND UTERUS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL).

RSSSLPRCCLHEGLHNGF -> SAMATYSATCANNSPAGGI
NMANSTANLELEAREYSLQRNQVPTVN (IN PMX1-B).

66A77F60 CRG32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91 krkgrrnrttfnssglgalervferthypdafvredlarrvnltearvgvwfgnrrakfr 150
MESODERMAL MUSCLE TYPES. THE PROTEIN BINDS TO AN A/T-RICH ELEMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30 RRKQRRNRITFALQQLEALEAVFAQTHYPDVFIREELAMKINLIEARVQVWFQNRRAKWR 89
                                                                                                                                                                                                                                                     -i- DEVELOPMENTAL STACE: EXPRESSED DURING CARDIOGENESIS.
-i- ALTERNATIVE PRODUCTS: TWO FORMS, PMX1-A (SHOWN HERE) AND PWX1-B, ARE PRODUCED BY ALTERNATIVE SPLICING.
-i- STMILARITY: STRONG WITH OTHER "PAIRED-TYPE" HOMEOBOX PROTEINS.
EMBL; L06502; 6199584; --
EMBL; L06502; 6199584; --
EMBL; N3973; 6460125; --
PROSITE: PS00027; HOMEOBOX.
HOMEOBOX, DAN-BIRDING; DEVELOPMENTAL PROTEIN; NUCLEAR PROTEIN;
ALTERNATIVE SPLICING; PHOSPHORYLATION.
DNA_BIND
94 153 HOMEOBOX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -! - FUNCTION: PROBABLE TRANSCRIPTION FACTOR. IT MAY HAVE A ROLE IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -i- SUBCELLULAR LOCATION: NUCLEAR.
-i- SUBNIT: CAN BIND AS A HETERODIMER WITH PAX3.
-i- SIMILARIY: STRONG WITH OTHER "PAIRED-TYPE" HOMEOBOX PROTEINS.
-i- SIMILARIY: COWTAINS A PAIRED BOX DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SCHAFER B.W., CZERNY T., BERNASCONI M., GENINI M., BUSSLINGER M.; NUCLEIC ACIDS RES. 22:4574-4582(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PHOSPHORYLATION (BY PROTEIN KINASE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 374; DB 7; Length 217;
Pred. No. 3.49e-51;
18; Mismatches 23; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BURRI M., TROMYOUKIS Y., BOPP D., FRIGERIO G., NOLL M.;
EMBO J. 8:1183-1190(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1991 (REL. 20, CREATED)
01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
10-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
PAIRED BOX PROTEIN PAX-7 (HUP1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    151 rneramlanknasliksysgdvtavegpivprpap 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           467 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24369 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 30-195 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 54.7%;
les 52; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL, Z35141; G602343; -...
EMBL; X15042; E14747; -...
EMBL; X15250; E14749; -...
EMBL; X15251; E14751; -...
```

m

```
Best Local Similarity 66.7%;
Matches 46; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /ARIANT WS2 ALA-81.
                                                                                                                                                                                                                                                                            275 rk-qagang 282
                                                                                                                                                                                                                                                                                                                                     11 : 11::
89 RKTERGASD 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAX3_HUMAN
                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEVELOPMENT OF ALVEOLAR RHABDOMYOSARCOMA.
--- DEVELOPMENTAL STAGE: EXPRESSED DURING EARLY NEUROGENESIS.
--- SUBCELLULAR LOCATION: NUCLEAR.
--- SUBCELLULAR LOCATION: NUCLEAR.
--- DISEASE: THE SPLOTCH (SP) MOUSE MUTANT DISPLAYS DEFECTS IN NEURAL TUBE CLOSURE IN THE FORM OF EXENCEPHALY AND SPINA BIFIDA.
--- SIMILARITY: STRONG WITH OTHER "PAIRED-TYPE" HOMEOBOX PROTEINS.
--- SIMILARITY: CONTAINS A PAIRED BOX DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    213 lkrkgrrsrttftaegleelekaferthypd1ytreelagrtkltearvgvwfsnrrarw 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۳.
TRANSCRIPTION REGULATION; HOMEOBOX; DNA-BINDING; NUCLEAR PROTEIN; DEVELOPMENTAL PROTEIN; PAIRED BOX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
MEDLINE; 91216108.
GOULDING M.D., CHALEPAKIS G., DEUTSCH U., ERSELIUS J.R., GRUSS
EMBO J. 10:1135-1147(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                           ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAX3 OR PAX-3.
MUS MUSCULUS (MOUSE).
EUKRAYOTA: METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTRERIA; RODENTIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE; 94010999.
VGAN K.J., EPSTEIN D.J., TRASLER D.G., GROS P.;
GENOMICS 17:364-36911993).
-I- FUNCTION: PROBABLE TRANSCRIPTION FACTOR ASSOCIATED WITH
                                                                                                                                                                                                                                                                                                                                                     Score 370; DB 7; Length 467;
Pred. No. 2.27e-50;
13; Mismatches 9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRANSCRIPTION REGULATION; PAIRED BOX; DEVELOPMENTAL PROTINUCLEAR PROTEIN; DNA-BINDING; HOMEOBOX; DISEASE MUTATION DOMAIN 34 159 PAIRED BOX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 219-260 FROM N.A., AND VARIANT SPLOTCH
                                                                                                                                                          HOMEOBOX.
POLY-ALA.
MISSING (IN REF. 2).
1; D2C7BCBD CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G -> R (IN SPLOTCH).
985984B6 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAX3_MOUSE STANDARD; PRT; 479 AA. P24610; P246100; P24610; P246100; P246
                                                                                                             PAIRED BOX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HOMEOBOX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE, 92034997.
EPSTEIN D.J., VEKEMANS M., GROS P.,
CELL 67:767-774(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; X59358; G53592; --
EMBL; S66429; G239201; --
EMBL; S66431; G239203; --
PIR; S15031; S15031.
HSSP; P02886; IENH.
PROSITE; PS00007; HOMEDBOX.
                                                                                                                                                      276 HG
346 PG
152 MJ
51019 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52984 MW;
                                                                                                                                                                                                                                                                                                                                                     Query Match 19.9%;
Best Local Similarity 66.7%;
Matches 46; Conservative
                                                                                                                                                      217 2
340 3
151 1
467 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42
479 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RANSFAC; T00680; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          273 rk-qagang 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RKTERGASD 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARIANT SPLOTCH
                                                                                                                 DOMAIN
DNA_BIND
DOMAIN
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA_BIND
VARIANT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
        STITIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PARTER SERVICE CONTRACTOR SERVICE SERV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
```

19.9%; Score 369; DB 7; Length 479;

Query Match

```
MEDLINE; 93258399.
TASSABEHJI M., READ A.P., NEWTON V.E., PATION M., GRUSS P., HARRIS R.,
STRACHAN T.;
                                                        215 lkrkgrrsrttftaegleeleraferthypdiytreelagrakltearvgvwfsnrrarw 274
                                                                                29 LRRKQRRNRTTFALQQLEALEAVFAQTHYPDVFTREELAMKINLTEARVQVWFQNRRAKW 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE; 95072569.
TASSABEHJI M., NEWTON V.E., LEVERTON K., TURNBULL K., SEEMANOVA E.,
KUNZE J., SPERLING K., STRACHAN T., READ A.P.;
HUM. MOL. GENET. 3:1069-1074(1994).
[10]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PASSABEHJI M., NEWTON V., LEVERTON K., TURNBULL K., SEEMANOVA E.,
KUNZE J., SPERLING K., STRACHAN T., READ A.;
HUM. MOL. GENET. 3:1069-1074(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ä.
                                                                                                                                                                                                                                                                                                                                                                                                                  HOMO SAPIENS (HUMAN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE; 93190976.
HOTH C.F., MILUNSKY A., LIPSKY N., SHEFFER R., CLARREN S.K.,
BALDWIN C.T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VARIANT WS1 LEU-50.
MEDLINE: 92168114.
BALDWIN C.T., HOTH C.F., AMOS J.A., DA-SILVA E.O., MILUNSKY
NATURE 355:637-638(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TASSABEHJI M., READ A.P., NEWTON V.E., HARRIS R., BALLING
GRUSS P., STRACHAN T.;
NATURE 355:635-636(1992).
                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 1-29 AND 197-479 FROM N.A.
RIETHMAN H.C., MACINA R.A.;
SUBMITTED (JUL-1994) TO EMBL/GENBANK/DDBJ DATA BANKS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              D., FRIGERIO G., NOLL
Pred. No. 3.62e-50;
13; Mismatches 9;
                                                                                                                                                                                                                                                                                                              01-NOV-1991 (REL. 20, CREATED)
01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
10-CCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
PAIRED BOX PROTEIN PAX-3 (HUP2).
                                                                                                                                                                                                                                                                         479 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. (PAX3A AND PAX3B).
MEDLINE; 94171226.
TSUKAMOTO K., NAKAMURA Y., NIKAWA N.;
HUM. GENET. 93:270-274(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AM. J. HUM. GENET. 52:455-462(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VARIANTS WS3 HIS-47 AND WS1 LEU-56.
                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VARIANT WS1 ALA-63--ILE-67 DEL. MEDLINE; 92168113.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /ARIANTS WS1 LEU-'45 AND ASP-99.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE; 89305521.
BURRI M., TROMVOUKIS Y., BOPP
EMBO J. 8:1183-1190(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 196-392 FROM N.A. MEDLINE; 95072569.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 30-195 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAT. GENET. 3:26-30(1993).
                                                                                                                                                                                                                                                                         STANDARD;
```

```
MIM; 148820; -.
MIM; 268220; -.
                                                   22880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAX7_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                       VARIANT
VARIANT
VARIANT
VARIANT
VARIANT
VARIANT
VARIANT
SEQUENCE
                                                                                                                                                                                                                                           VARSPLIC
VARSPLIC
                                                                                                                                                                                  DNA_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                 VARSPLIC
                                                                                                                                                                                                                            VARSPLIC
                                                                                                                                                                                                                                                                                    VARIANT
VARIANT
VARIANT
                                                                                                                                                                                                                                                                          VARIANT
                                                                                                                                                                                                                                                                                                                                                                VARIANT
                                                                                                                                                                                                                                                                                                                                                                               /ARIANT
                                                                                                                                                                                                                                                                                                                                                                                             VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                            VARIANT
                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loca
Matches
      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AMERIMAN E.C. M.;

ACTION OF STORMED C.I.S. DOHNSON W.G., HAMEL B.C.J.,

ANTIMANDER STORMED C.I.S. DOHNSON W.G., HAMEL B.C.J.,

ANTIMANDER STORMED C.I.S. D. DOHNSON W.G., HAMEL B.C.J.,

I SUBCILLULAR LOCATION: NUCLEAR.

II SUBCILL D RAX3 AND PAX3B.

C. I- SUBCILL D RAX3 AND PAX3B.

C. I- SUBCILL D RAX3 AND PAX3B.

C. I- DISEASE: DEFECT IN PAX3 AND PAX3B.

C. I- DISEASIVE SENSORY-NEDRAL DEARLACTERIZED MITH NON PROGRESSIVE SENSORY-NEDRAL DEARLACEMENT OF THE INNER CORNER OF THE INNER CORNER OF THE INNER CORNER OF THE INNER CORNER OF DISTINGUISHED. TYPE II (WS1 OR KLEIN-WARDENBURG SYNDROME) IS CHARACTERIZED WITH JOINT CONTRERS. HAMD SYNDROME (CDHS), IS THOUGHT CONTRERS. HAMD SYNDROME (CDHS), IS THOUGHT CONTRERS. HAMD SYNDROME (CDHS), IS THOUGHT OF THE WRIST. SHORT HYPOPLASIA OF THE NASAL AND SYNDROME (CDHS), IS THOUGHT CONTRESS. HAMD SYNDROME CONTRIBED OF THE WASHIESE ABBENCE OR HYPOPLASIA OF THE NASAL AND SHORD SHORT OF THE WRIST, SHORT NOSE WITH THIN NARES, HYPOPLASTIC MAXILLA, SMALL AND SHORT NOSE WITH THIN NARES, LIMITED MOVEMENT OF THE WRIST, SHORT SHOPPALASIA OF THE NASAL BOMES, HYPOPLASIA OF THE WRIST, SHORT SHOPPALASIA OF THE NASAL SHORT SHOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- SIMILARITY: STRONG WITH OTHER "PAIRED-TYPE" HOMEOBOX PROTEINS
               MEDLINE; 95135456.
PIERPONT J.W., DOOLAN L.D., AMANN K., SNEAD G.R., ERICKSON R.P.;
HUM. MUTAT. 4:227-228(1994).
                                                                                                                                                                                                                                                                                                                                                                                       VARIANT LYS-315.
HOL F.A., GEURDS M.P.A., CHATKUPT S., SHUGART Y.Y., BALLING R.,
SCHRANDER-STUMPEL C.T.R.M., JOHNSON W.G., HAMEL B.C.J.,
                                                                                     MEDLINE; 95126143.
LALWANI A.K., BRISTER J.R., FEX J., GRUNDFAST K.M., PLOPLIS SAN AGUSTIN T.B., WILCOX E.R.;
AM. J. HUM. GENET. 56:75-83(1995).
                                                                                                                                                                            MEDLINE; 95243235.
ZLOTOGORA J., LERER I., BAR-DAVID S., ERGAZ Z., ABELIOVICH
AM. J. HUM. GENET. 56:1173-1178(1995).
                                                                                                                                                                                                                                                                                                                             MEDLINE; 96263735.
ASHER J.H. JR., SOMMER A., MORELL R., FRIEDMAN T.B.;
HUM. MUTAT. 7:30-35(1996).
                                                                                                                                                                                                                                       VARIANTS WS1 MET-60; GLU-85 AND SER-238.
MEDLINE; 96042708.
BALDWIN C.T., HOTH C.F., MACINA R.A., MILUNSKY A.;
AM. J. MED. GENET. 58:115-122(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -1- SIMILARITY: CONTAINS A PAIRED BOX DOMAIN. EMBL. 012259; G555819; -2 EMBL; U12259; G555819; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -; NOT_ANNOTATED_CDS.
G545845; -.
G545847; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NOT_ANNOTATED_CDS
                                                                          VARIANTS WS1 PHE-265 AND GLY-271.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              U12269; G555819; -- U12269; G555819; -- U12260; G555819; JOINED. U12262; G555819; JOINED. U12262; G555819; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E224055; JOINED. E224055; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E224055;
                                                                                                                                                                                                                                                                                                               VARIANT CDHS LYS-47.
                                                                                                                                                                 VARIANT WS3 PHE-84.
   VARIANT WS1 VAL-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      806960;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
```

```
-i- SUBUNIT: CAN BIND AS A HETERODIMER WITH PAX3.
-i- DEVELOPMENTAL STAGE: EXPRESSED SPECIFICALLY DURING THE DEVELOPMENT
OF THE WERVOUS AND MUSCULAR SYSTEM.
-i- SIMILARITY: STRONG WITH OTHER "PAIRED-TYPE" HOMEOBOX PROTEINS.
                                                                                                                                                         ASAPQSDEGSDIDSEPDLPL -> GKRWRLGRRTCWVTWRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               F -> L (IN WS1).
N -> H (IN WS3).
N -> K (IN CDHS).
P -> L (IN WS1; IMPORTANT HEARING LOSS).
R -> L (IN WS1; ASSOCIATED WITH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOSTES B., WALTHER C., GRUSS.P.;
MECH. DEV. 33:27-37(1990).
-!- FUNCTION: PROBABLE TRANSCRIPTION FACTOR. IT MAY HAVE A ROLE IN
                                                                                                                                                                         SAS (IN PAX3A).
MISSING (IN PAX3A).
ASAPGSDEGSD -> GKALVSGVSSH (IN PAX3B)
MISSING (IN PAX3B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; RODENTIA.
                                                                                        NUCLEAR PROTEIN; DISEASE MUTATION; CHROMOSOMAL TRANSLOCATION.
PROTO-ONCOGENE; ALTERNATIVE SPLICING; POLYMORPHISM.
PROSITE; PS00027; HOMEOBOX.
PROSITE; PS00034; PAIRED_BOX.
TRANSFAC; T00397; -.
TRANSFAC; T00679; -.
TRANSCRIPTION REGULATION; PAIRED BOX; DEVELOPMENTAL PROTEIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 369; DB 7; Length 479;
Pred. No. 3.62e-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-FEB-1996 (REL. 33, CREATED)
01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
1. FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)
PAIRED BOX PROTEIN PAX-7 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6EE1491D CRC32;
                                                                                                                                                                                                                                                                                                                                    MENINGOMYELOCELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13; Mismatches
                                                                                                                                                                                                                                                                                                                                                    -> M (IN WS1)
-> V (IN WS1)
                                                                                                                                                                                                                                                                                                                                                                                   (IN WS]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            290 AA
                                                                                                                          BOX.
                                                                                                                                                                                                                                                                                                                                                                                                      -> A (IN 1
                                                                                                                                                                                                                                                                                                                                                                                    MISSING
                                                                                                                                                                                                                                                                                                                                                                                                                                         ឧ០១៤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                         ۰
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ^
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۸
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -1 - SUBCELLUEAR LOCATION: NUCLEAR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52967 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 66.7%;
les 46; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                        278
                                                                                                                                                                                                                                                                                                                                                  60
67
67
88
88
85
99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAX7 OR PAX-7.
MUS MUSCULUS (MOUSE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       238
265
271
315
479 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     275 rk-qagang 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89 RKTERGASD 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE; 91265334
                                                                                                                                                                                                                                                                                                                                                    62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MYOGENESIS:
```

S

ö

Length 216;

. 9 , ස

a

STITIES

```
COTURNIX COTURNIX JAPONICA (JAPANESE QUAIL).
EUKARYOTA, METAZOA, CHORDATA, VERTEBRATA, TETRAPODA, AVES, NEOGNATHAE;
GALLIFORMES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    206 lkrklgrnrtsftgegiealekeferthypdvfarerlaakidlpearigvwfsnrrakw 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MARTIN W., CARRIED.

VANDENBUNDER B., STEHELIN D., SAULE S.;
ONCOGERE 7.1721-1728(1992).

-1- FUNCTION: MAY BE A TRANSCRIPTION FACTOR WITH IMPORTANT FUNCTIONS
IN EYE AND NASAL DEVELOPMENT.
-1- SUBCELLULAR LOCATION: NUCLEAR.
-1- SIMILARITY: SCAPION: NUCLEAR.
-1- SIMILARITY: CONTAINS A PAIRED BOX DOMAJE.

EMBL: X70475; G311772; --
TRANSCRIPTION REGULATION; HOMEOBOX; DNA-BINDING; NUCLEAR PROTEIN;
DEVELOPMENTAL PROTEIN; PAIRED BOX.

DOMAIN 129 209 GLN/GLY-RICH.
                                                              SEQUENCE FROM N.A.
MEDLINE; 94170909.
LI H.S., YANG J.M., JACOBSON R.D., PASKO D., SUNDIN O.;
LI H.S., YANG J.M., JACOBSON R.D., PASKO D., SUNDIN O.;
LI H.S., YANG J.M., JACOBSON R.D., PASKO D., SUNDIN O.;
LI EXE AND NASAL DEVELOPMENT.
LI EYE AND NASAL DEVELOPMENT.
-1- SUBCELLULAR LOCATION: NUCLEAR.
-1- SIMILARITY: STRONG WITH OTHERR "PAIRED-TYPE" HOMEOBOX PROTEINS.
-1- SIMILARITY: CONTAINS A PAIRED BOX DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29 LRRKQRRNRTTFALQQLEALEAVFAQTHYPDVFTREELAMKINLTEARVQVWFQNRRAKW 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6 lkrklgrnrtsftgeglealekeferthypdvfarerlaakidlpearigvwfsnrrakw 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29 LRRKQRRNRTTFALQQLEALEAVFAQTHYPDVFTREELAMKINLTEARVQVWFQNRRAKW 88
                                                                                                                                                                                                                                                                                                                            EMBL; S69508; G545839; -.
TRANSCRIPTION REGULATION; HOMEOBOX; DNA-BINDING; NUCLEAR PROTEIN;
BY TANSCRIPTION REGULATION; PAIRED BOX.
NON_IER 1 1
DNA_BIND 10 69 HOMEOBOX.
SEQUENCE 216 AA; 24469 MW; DAB2288B CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 354; DB 7; Length 416
Pred. No. 3.95e-47;
18; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 354; DB 7; Length 216
Pred. No. 3.95e-47;
18; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAIRED BOX.
GLN/GLY-RICH.
HOMEOBOX.
W; D636633C CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-FEB-1996 (REL. 33, CREATED)
01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
PAIRED BOX PROTEIN PAX-6 (PAX-QNR).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              416 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA_BIND 210 269 H
SEQUENCE 416 AA; 46027 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 57.1%;
Matches 44; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 57.1%;
Matches 44; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           89 RKTERGASDQEPGAKEP 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rreeklrngrrgasntp 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89 RKTERGASDQEPGAKEP 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66 rreeklrngrrgasntp 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. TISSUE=NEURORETINA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE; 92366156
              SALLIFORMES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAX6_COLJA
P47238;
              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                             Gaps 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAX-6.
GALLUS GALLUS (CHICKEN).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; AVES; NEOGNATHAE;
                                                                                                                                                                                                                                                                                                                                                                                                                262 phl-gahhhgghhlshlghgpppkrkrrhrtifteeqleqleatfdkthypdvvlreqla 320 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE; 96202483.
GORIELY A., STELLA M., COFFINIER C., KESSLER D., MAILHOS C.,
GORIELY A., STELLAN C.,
DESSAIN S., DESPARAN C.,
DEVELOPMENT 122:1641-1650(1996).
-i- SUBCELLULAR LOCATION: NUCLEAR.
-i- SIMILARITY: STRONG WITH OTHER "PAIRED-TYPE" HOMEOBOX PROTEINS.
-i- SIMILARITY: CONTAINS A PAIRED BOX DOMAIN.

EMBL; U20792; G736381; -.

EMBL; U20792; G736381; -.

EMBL; U20792; G736381; -.

DEVELOPMENTAL PROTEIN; PAIRED BOX.

NON_TER 1 125 PAIRED BOX.

DOMAIN <1 125 HOMEOBOX.

NON_TER 290 290

SEQUENCE 290 AA; 32911 MW; 51176D4F CRC32;
                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROTEIN; NUCLEAR PROTEIN; DNA-BINDING; HOMEOBOX 14 107 POLY-ALA.
                                                                                                                                                                                                                                                                                              Score 360; DB 7; Length 290;
Pred. No. 2.42e-48;
13; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 419;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 357; DB 4; Length 419;
Pred. No. 9.79e-48;
16; Mismatches 29; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DRÓSOPHILA MELANOGASTER (FRUIT FLY).
EUKARYOTA; METAZOA; ARTHROPODA; INSECTA; DIPTERA
                                                                                                                                                        <1 125 PAIRED BOX.
181 240 HOMEOBOX.
290 290 AA; 32911 MW; 51176D4F CRC32;</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     164 169 POLY-SER.
195 199 POLY-ALA.
286 345 HOMEOBOX.
419 AA: 44949 MW; D6B80216 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAX6_CHICK STANDARD; PRT; 216 AA. P47237; 01-58-1996 (REL. 33, CREATED) 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE) 01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE) PAIRED BOX PROTEIN PAX-6 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-0CT-1996 (REL. 34, CREATE)
01-0CT-1996 (REL. 34, LAST SEQUENCE UPDATE)
01-0CT-1996 (REL. 34, LAST ANNOTATION UPDATE)
HOMEOBOX PROTEIN GOOSECOID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           321 lkvdlkeervevwfknrrakvrkqkreeqer 351 ::::| | ||:||| ||:||| || :: 68 MKINLTEARVQVWFQNRRAKWRKTERGASDQ 98
                                                                                                                                                                                                                                                                                              Query Match 19.4%;
Best Local Similarity 65.2%;
Matches 45; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match 19.2%;
Local Similarity 49.5%;
tes 45; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; X95420; E220356; --
FLYBASE; FBGN00????; GSC
DEVELOPMENTAL PROTEIN; NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              237 rk-qagang 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       89 RKTERGASD 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T 8
GSC_DROME
P54366;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
DOMAIN
DNA_BIND
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Touery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
```

Matches

ö 윱 ö

ö

Length 416,

RESULT

U54444688888855554

```
01-AUG-1992 (REL. 23, LAST SEQUENCE UPDATE)
01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
PAIRED BOX PROTEIN PAX-6 (OCULORHOMBIN) (ANIRIDIA, TYPE II PROTEIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAIRED BOX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HOMEOBOX.
                                                                                                                                                                                                                                                                                GLASER T., WALTON D.S., MAAS R.L.;
NAT. GENET. 2:232-239(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -! - SUBCELLULAR LOCATION: NUCLEAR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٢
                                                                                                                                                                                                                                                                                                                                                             HANSON I.M., SEAWRIGHT A., HARDM.
FEKETE G., VAN HEYNINGEN V.;
HUM. MOL. GENET. 2:915-920(1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00027; HOMEOBOX.
PROSITE; PS00034; PAIRED_BOX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; M77844; G189354; -...
EMBL; M77844; G189353; -...
EMBL; M93650; G189633; -...
PIR; A41664; A41644.
HSSP; P02836; IENH.
                                                                                                                                 SEQUENCE FROM N.A. MEDLINE; 92103673.
                                                                                                                                                                                                                                                SEQUENCE FROM N.A. MEDLINE; 94258210.
                                                                                                                                                                                                                                                                                                                                               MEDLINE; 93372853.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FRANSFAC; T01122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISEASE MUTATION
                                                                                                                                                                                                                                                                                                                                  /ARIANT TRP-208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARIANT CYS-125
                                                                                                                                                                                                                                                                                                                                                                                                                               ARIANT GLY-26
                                                   PAX6 OR AN2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OMAIN
     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    206 lkrklgrnrtsftgeglealekeferthypdvfarerlaakidlpearigywfsnrrakw 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -1 - FUNCTION: MAY BE A TRANSCRIPTION FACTOR WITH IMPORTANT FUNCTIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE; 92100191.
HILL R.E., FAVOR J., HOGAN B.L.M., TON C.C.T., SAUNDERS G.F.,
HANSON I.M., PROSSER J., JORDAN T., HASTIE N.D., VAN HEYNINGEN V.;
NATURE 354:522-525(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FRANSCRIPTION REGULATION, HOMEOBOX; DNA-BINDING; NUCLEAR PROTEIN; DEVELOPMENTAL PROTEIN; PAIRED BOX; ALTERNATIVE SPLICING;
                                                                                                                                           PAX6 OR PAX-6 OR SEY.
MUS MUSCULUS (MOUSE).
EURARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 354; DB 7; Length 422;
Pred. No. 3.95e-47;
18; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                           MEDLINE; 92120664. **
WALTHER C., GUENET J.L., SIMON D., DEUTSCH U., JOSTES GOULDING M.D., PLACHOV D., BALLING R., GRUSS P.;
GENOMICS 11:424-434(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRO/SER/THR-RICH.
Q -> QTHADAKVQVLDNEN.
CE46F705 CRC32;
                                                                            01-OCT-1993 (REL. 27, CREATED)
01-OCT-1993 (REL. 27, LAST SEQUENCE UPDATE)
10-CCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
PAIRED BOX PROTEIN PAX-6.
                                                 422 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAIRED BOX.
GLN/GLY-RICH.
                                                                                                                                                                                                                           SEQUENCE FROM N.A., AND PARTIAL SEQUENCE. MEDILINE; 9249181 WALTHER C., GRUSS P., DEVELOPMENT 113:1435-1449(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HOMEOBOX.
                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .r 12
PAX6_HUWAN STANDARD;
PAS367;
01-AUG-1992 (REL. 23, CREATED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00027; HOMEOBOX. PROSITE; PS00034; PAIRED_BOX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       422 AA; 46683 MW;
                                                                                                                                                                                                                                                                                                           SEQUENCE OF 4-131 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
19.1%;
Best Local Similarity 57.1%;
Hatches 44; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       266 rreeklrngrrgasntp 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RKTERGASDQEPGAKEP 105
                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; C41061; C41061.
                                                                                                                                                                                              EUTHERIA; RODENTIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P02836; 1ENH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISEASE MUTATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         129
210
279
66
                                                                                                                                                                                                                                                                                                                                                                                                            VARIANTS IN SEY
                              T 11
PAX6_MOUSE
P32117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RANSFAC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA_BIND
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VARSPLIC
```

SOTTTTTTTTTTS SOCIETY STATES SOCIETY S

DOMAIN

Ż

422

83

出るな

a ð g ò

```
CEREBELLUM.
-!- SIMILARITY: STRONG WITH OTHER "PAIRED-TYPE" HOMEOBOX PROTEINS.
-!- SIMILARITY: CONTAINS A PAIRED BOX DOMAIN.
-!- DISEASE: DEFECTS IN PAGE ARE THE CAUSE OF ANIRIDIA, TYPE II AN AUTOSOWAL DOMINANT CONGENITAL, BILATERAL PANOCULAR DISORDER CHARACTERIZED BY COMPLETE OR PARTIAL ABSENCE OF THE FOVER AND MALFORMATIONS OF THE LENS AND ANTERIOR CHAMBER.
IT IS ALSO INVOLVED IN PETER'S ANOMALY, A CONGENITAL DEFECT OF THE ANTERIOR CHAMBER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDILINE; 96225435.
AZUMA N., NISHINA S., YANAGISAWA H., OKUYAMA T., YAWADA M.;
NAT. GENET. 13:141-142(1996).
-!- FUNCTION: MAX BE A TRANSCRIPTION FACTOR WITH IMPORTANT FUNCTIONS
IN EYE AND NASAL DEVELOPMENT.
                                                                                                                                                                      TON C.C.T., HIRVONEN H., MIWA H., WELL M.M., MONAGHAN P., JORDAN T., VAN HEYNINGEN V., HASTIE N.D., MEIJERS-HEIJBOER H., DRECHEIER M., COLLINS F., SWAROOP A., STRONG L.C., SAUNDERS G.F.; CELL 67:1059-1074(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -> G (IN PETER'S ANOMALY).
-> C (IN ISOLATED FOVEAL HYPOPLASIA).
-> W (IN ANIRIDIA).
-> R (IN REF. 2).
634E4AA8 CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- DEVELOPMENTAL STAGE: EXPRESSED IN THE DEVELOPING EYE AND BRAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRANSCRIPTION REGULATION; HOMEOBOX; DNA-BINDING; NUCLEAR PROTEIN; DEVELOPMENTAL PROTEIN; PAIRED BOX; ALTERNATIVE SPLICING;
HOMO SAPIEMS (HUMAN).
EUKRRYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
EUTHERIA; PRIMATES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HARDMAN K., HODGSON S., ZALETAYEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE; 94214497.
HANSON I.M., FLETCHER J.M., JOHDAN T., BROWN A., TAYLOR
ADAMS R.J., PUNNET H.H., VAN HEYNINGEN V.;
NAT. GENET. 6:168-173(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QTHADAKVQVLDNQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRO/SER/THR-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLN/GLY-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1128
209
209
209
422
66
1125
208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      208
317
422 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VARIANT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VARIANT
```

89 RKTER 93

ö

Length 422;

ď

ö 윱

```
SEQUENCE FROM N.A.
MEDLINES, 87051745.
FRIGERIO G., BURRI M., BOPP D., BAUMGARTNER S., NOLL M.;
CELL 47:735-746(1986).
-1- FUNCTION: PRD IS A PAIR-RULE PROTEIN REQUIRED FOR SEGMENTATION IN
DROSOPHILA. CAPABLE OF SEQUENCE-SPECIFIC DNA-BINDING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   202 esepgialkrkgrrcrttfsasgldelerafertgypdlytreelagrtnltearigvwf 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23 DFDDGF-LRRKQRRNRTTFALQQLEALEAVFAQTHYPDVFTREELAMKINLTEARVQVWF 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 12-145 AND 162-241 FROM N.A.
MEDLINE; 87051758.
MEDLINE; BORRI M.;
CELL 47:1033-1040(1986).
-i- FUNCTION: GOOSEBERRY DISTAL AND PROXIMAL ARE SEGMENT-POLARITY
                                                                                                                                                                                                                                                                                                                             -i- SIMILARITY: STRONG WITH OTHER "PAIRED-TYPE" HOMEOBOX PROTEINS.
-i- SIMILARITY: CONPAINS A PAIRED BOX DOMAIN.
EMBL; M14548; G158160; -
PIR; A26062; A26062.
                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
19.0%; Score 353; DB 5; Length 613;
Best Local Similarity 47.1%; Pred. No. 6.29e-47;
Matches 49; Conservative 26; Mismatches 26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  262 snrrarlrkqhtsvsggapggaaasvshvaassslpsvvssvps 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSB-P OR GSBA.
DROSOPHILA MELANOGASTER (FRUIT FLY).
EUKARYOTA; METAZOA; ARTHROPODA; INSECTA; DIPTERA.
                                                                                                                                                               DROSOPHILA MELANOGASTER (FRUIT FLY).
EUKARYOTA; METAZOA; ARTHROPODA; INSECTA; DIPTERA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0922346E CRC32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1988 (REL. 09, CREATED)
01-NOV-1988 (REL. 09, LAST SEQUENCE UPDATE)
01-FEB-1995 (REL. 31, LAST ANNOTATION UPDATE)
                                                                               01-JAN-1988 (REL. 06, CREATED)
01-JAN-1988 (REL. 06, LAST SEQUENCE UPDATE)
01-FEB-1995 (REL. 31, LAST ANNOTATION UPDATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BAUMGARTHER S., BOPP D., BURRI M., NOLL M.;
GENES DEV. 1:1247-1267(1987).
                                                 613 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GOOSEBERRY PROXIMAL PROTEIN (BSH4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  65497 MW;
                                                                                                                   01-FEB-1995 (REL. 31, LAST AU
SEGMENTATION PROTEIN PAIRED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 552
164
120
220
613 AA;
                                                                                                                                                                                                                                                                                                                                                                                                  HSSP; P02836; 1ENH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE; 88112802.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T 15
GSBP_DROME
                                  T 14
HMPR_DROME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VARIANT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P09083;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29 IRRKQRRNTTFALQQLEALEAVFAQTHYPDVFTREELAMKINLTEARVQVWFQNRRAKW 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -1- FUNCTION: TRANSCRIPTION FACTOR EXPRESSED IN SPATIALLY RESTRICTED REGIONS OF THE NEURAL TUBE DURING EMBRYONIC DEVELOPMENT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Gaps
                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                KRAUSS S., JOHANSEN T., KORZH V., MOENS U., ERICSON J.U., EJOSE A.;
EMBO J. 10:3609-3619(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -1- TISSUE SPECIFICITY: SPATIALLY RESTRICTED REGIONS OF THE NEURAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -1- SIMILARITY: STRONG WITH OTHER "PAIRED-IVPE" HOMEOBOX PROTEINS.
-1- SIMILARITY: CONTAINS A PAIRED BOX DOMAIN.
EMBL; X61389; G62549; --
EMBL; X63183; G62547; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIR; S1858; S1858.

PRSP: PO2836; LENH.

PROSITE; PS00024; HOMEOBOX.

TRANSFAC; T00682; --

TRANSCRIPTION REGLATION; HOMEOBOX; DNA-BINDING; NUCLEAR PROTEIN; DEVELOPMENTAL 23 147

PARIED BOX.
                                                                                                                                                                                                                                                                                                                               PAX[ZF-A].
BRACHYDANTO RERIO (ZEBRAFISH) (ZEBRA DANIO).
EUKRYOTA, METAZOA; CHORDATA; VERTEBRATA; PISCES; GNATHOSTOWATA;
SSIECHTHYES; ACTINOPTERYGII; CYPRINIFORMES.
                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 353; DB 7; Length 437;
Pred. No. 6.29e-47;
12; Mismatches 10; Indels
Score 354; DB 7; Length 422
Pred. No. 3.95e-47;
18; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SER/THR/PRO-RICH.
Q -> QTHADAKVQVLDNEN.
6A50EC83 CRC32;
                                                                                                                                                                                                                                                            01-AGC-1992 (REL. 23, CREATED)
01-AGC-1992 (REL. 23, LAST SEQUENCE UPDATE)
01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
PAIRED BOX PROTEIN PAX[ZF-A] (PAX-6).
                                                                                                                                                                                                                                 437 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE; 91375540.
KRAUSS S., JOHANSON T., KORZH V., FJOSE A.;
NATURE 353:267-270(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
MEDLINE; 92315909.
PUESCHEL A.W.P., GRUSS P., WESTERFIELD M.;
DEVELOPMENT 114:643-651(1992).
                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    298 437
66 66
437 AA; 48425 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match 19.0%;
Local Similarity 66.2%;
les 43; Conservative
Query Match 19.1%;
Best Local Similarity 57.1%;
Matches 44; Conservative
                                                                                                                                266 rreeklrngrrgasntp 282
                                                                                                                                                               89 RKTERGASDQEPGAKEP 105
                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     288
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. MEDLINE; 92037521.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          285 rreek 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LISSUE-EMBRYO
                                                                                                                                                                                                                               PAX6_BRARE
P26630;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
VARSPLIC
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
```

ä

Gaps

.;

econocidado do comencio.

Matches

셤

ö

STITIES SOUP